

CONVOY PQ-17 1942

Disaster in the Arctic



ANGUS KONSTAM

ILLUSTRATED BY ADAM TOOBY

CAMPAIGN 414

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INTRODUCTION

In June 1941, Germany and its allies invaded the Soviet Union. At that moment, a vast nation that had been a dubious neutral power suddenly became Britain's most important ally. Within a month, Britain agreed to supply military aid to the Soviet Union: tanks, trucks, aircraft and other war materiel.

These shipments were sent to help the Soviets resist the German invaders, at a time when the fate of the world hung in the balance. While some aid was sent through Iran, the bulk of the shipments were transported by sea, directly from Britain to the Russian Arctic ports of Archangel and Murmansk. This meant passing close to German-occupied Norway, where both the Kriegsmarine (German Navy) and Luftwaffe (German Air Force) were firmly established. So, the British Home Fleet was given the responsibility of protecting these Arctic convoys as they passed within range of the German bases in northern Norway.

In the summer of 1942, with no 'Second Front' possible, the most significant challenge facing the Western Allies was ensuring this flow of war materiel continued. The Germans were slow to wake up to the threat posed by these convoys. As such, until the start of 1942, the convoys were largely unopposed. Then, when the Germans realized what was at stake, heavy air and naval reinforcements were redeployed to northern Norway. This included a powerful naval surface group, centred on the battleship *Tirpitz*, sister ship of *Bismarck*. In January 1942, *Tirpitz* arrived in Norwegian waters. It was moored in the Faettenfjord to the north-east of Trondheim, a spot chosen because it was easy to defend and difficult to attack. *Tirpitz* had been sent there to form the core of the Kriegsmarine's battlegroup in Norwegian waters. Essentially, this battlegroup was what was known as a 'fleet in being'. This was a strategic concept first defined by the American naval theorist Alfred Mahan, which centred on the use of a smaller fleet when facing a larger one.

In essence, a smaller fleet, even when it remained in port, would still pose a threat to a larger fleet, obliging the latter to keep a similar-sized force in the region to counter its smaller rival. This would prevent the larger fleet from deploying its resources to other regions – for instance to the Mediterranean or the Far East. So, the presence of *Tirpitz* at the heart of a powerful German naval surface group would force the British Admiralty to attach a sizeable force of capital ships to the Home Fleet based in Scapa Flow, to counter any sortie by this 'fleet in being'. This threat of a German naval sortie was why, from early 1942, the Arctic convoys were protected by a Distant Covering



Force, which was made up of battleships and, when possible, an aircraft carrier as well. It was this overblown fear of *Tirpitz* that led directly to the disaster that overtook Convoy PQ-17.

This eastbound Arctic convoy made up of 36 merchant ships left Iceland on 27 June, bound for Archangel in northern Russia. It never arrived – at least not as an organized entity. Instead, reactive moves by the Kriegsmarine suggested that *Tirpitz* would sortie against the convoy, supported by a powerful battlegroup of German surface ships. As a result, on 4 July, the decision was made for the convoy to ‘scatter’. All but the smallest supporting warships withdrew, and the merchantmen were essentially left to their own devices. In July, it never really gets dark in the Arctic – the sun does not really drop below the horizon. This suited the Luftwaffe, whose bombers were then free to pick off the lone merchant ships one after the other. A wolfpack of U-boats also played its part. There were moments of immense bravery, as individual ships and their crews fought off enemy attacks, but the result was inevitable. What followed was a slaughter. In the end, only 11 merchantmen reached their destination. The others were sunk, and over 120,000 tons of vital war supplies were lost.

Convoy PQ-17 was an unmitigated disaster for the Allies – the worst convoy loss of the entire war. The calamity was made even more poignant because, in the end, *Tirpitz* never put to sea. The British Admiralty’s decision to scatter the convoy was one of the most controversial orders of the entire war at sea. Here, we take a fresh look at that decision, the reasoning behind it, and the horrendous consequences for the Allied cause.

A pair of British escorts enter the Hvalfjörður in late May 1942, during the assembly of Convoy PQ-17. On the left is the destroyer HMS *Icarus*, while behind it is the Soviet tanker *Azerbaijan*, which had a predominantly female crew.

CHRONOLOGY

Fri, 26 June 1942

Convoy QP-13 sails from Archangel.

Sat, 27 June

1600hrs Convoy PQ-17 sails from Hvalfjörður in Iceland.

1720hrs *Richard Bland* runs aground and returns to Icelandic port.

Mon, 29 June

1200hrs Captain Broome joins PQ-17 with remaining close escorts.

1700hrs Admiral Tovey's Distant Covering Force sails from Scapa Flow.

2240hrs *Exford* runs aground and returns to Icelandic port.

Tues, 30 June

0200hrs Rear Admiral Hamilton's Covering Force sails from Seyðisfjörður in Iceland.

1550hrs Convoy QP-13 sighted by U-boat.

2140hrs *Grey Ranger* collides with drifting ice and returns to Icelandic port.

Wed, 1 July

1000hrs Convoy PQ-17 sighted by *U-456* off Jan Mayen Island.

1400hrs First appearance of a Bv 138 seaplane shadowing Convoy PQ-17.

1500hrs Tovey's Distant Covering Force passed PQ-17.

1510hrs Unsuccessful attack on convoy by *U-456*.

Thurs, 2 July

1300hrs Convoys PQ-17 and QP-13 pass each other north-east of Jan Mayen Island.

1700hrs Initial phase of Operation *Rösselsprung* approved by Admiral Carls.

1800–1830hrs First air attack on convoy.

2000hrs Admiral Schniewind's battlegroup sails from the Faettenfjord near Trondheim.

Fri, 3 July

0230hrs Vizeadmiral Kummetz's battlegroup sails from Narvik.

1320hrs RAF flight over the Faettenfjord reveals *Tirpitz* has sailed.

1600hrs Kummetz's battlegroup arrives in the Altenfjord.

1630hrs RAF flight over Narvik reveals second German battlegroup has sailed.

2215hrs Hamilton's force first detected by a Bv 138 seaplane.

Sat, 4 July

0440–0500hrs Second air attack on Convoy – *Christopher Newport* crippled.

0655hrs Tovey's force sighted by German reconnaissance aircraft.

0900hrs Schniewind's battlegroup arrives in the Altenfjord.

1200hrs Hamilton's force permitted to venture farther east.

1645hrs Convoy attacked unsuccessfully by *U-88*.

1900hrs	First Sea Lord convenes meeting of the Admiralty.	1256hrs	<i>Aldersdale</i> , crippled in air attack, is sunk by <i>U-457</i> .
1910–1930hrs	Third air attack on convoy.	1435hrs	<i>Honomu</i> sunk by <i>U-456</i> .
2030–2050hrs	Fourth air attack on convoy. <i>Navarino</i> and <i>William Hooper</i> crippled, <i>Azerbaijan</i> damaged.	1500hrs	<i>Fairfield City</i> sunk in air attack.
2111hrs	Hamilton ordered to withdraw to the west at speed.	1550hrs	<i>Earlston</i> crippled in air attack. Vessel is finally sunk by <i>U-334</i> at 1747hrs.
2123hrs	Convoy ordered to disperse to Russian ports.	1700–1920hrs	Schniewind's battlegroup sighted by Allied submarines and aircraft.
2136hrs	Convoy ordered to scatter.	1705hrs	<i>Peter Kerr</i> crippled in air attack.
2215hrs	Convoy PQ-17 begins to scatter.	1730–1745hrs	<i>Bolton Castle</i> and <i>Washington</i> sunk in air attack, and <i>Paulus Potter</i> crippled.
2220hrs	Destroyers of Close Escort attached to Hamilton's command.	1800hrs	<i>Daniel Morgan</i> damaged in air attack. Vessel is finally sunk by <i>U-88</i> at 2252hrs.
2230hrs	Hamilton's Covering Force begins withdrawal at speed.	1818hrs	<i>Zaafaran</i> sunk in air attack.
2330hrs	<i>William Hooper</i> sunk by <i>U-334</i> .	2102hrs	<i>River Afton</i> sunk by <i>U-703</i> .
Sun, 5 July		2132hrs	Schniewind orders battlegroup to abort sortie and return to the Altenfjord.
0100hrs	Germans deduce convoy has scattered, and deploy accordingly.	Mon, 6 July	
0330hrs	Admiralty confirms that <i>Tirpitz</i> has not sortied.	0610hrs	<i>Pan Atlantic</i> sunk in air attack.
0720hrs	<i>Navarino</i> sinks.	0900hrs	Schniewind's battlegroup anchors in Altenfjord.
0808hrs	<i>Christopher Newport</i> sunk by <i>U-457</i> .	1530hrs	Remaining convoy close escorts arrive in Matochkin Strait.
0827hrs	<i>Empire Byron</i> sunk by <i>U-703</i> .	1638hrs	<i>John Weatherspoon</i> sunk by <i>U-255</i> .
0940hrs	Trawler <i>Ayrshire</i> hides three merchant ships amid the pack ice.	1800hrs	Schniewind's battlegroup leaves the Altenfjord, bound for Narvik.
1015hrs	<i>Carlton</i> sunk by <i>U-88</i> .	Tues, 7 July	
1030hrs	<i>Pan Kraft</i> hit in air attack.	0927hrs	<i>Alcoa Ranger</i> sunk by <i>U-255</i> .
1130hrs	Schniewind sorties from the Altenfjord.	1100hrs	<i>Ayrshire</i> leaves bolthole in pack ice with three merchantmen.

1840hrs	<i>Hartlebury</i> sunk by <i>U-355</i> .	Sat, 11 July	
1900hrs	Captain Dowding's makeshift convoy departs from Matochkin Strait.	1100hrs	<i>Samuel Chase</i> damaged in air attack in White Sea.
Wed, 8 July		1400hrs	Captain Jauncey's escort force reaches Archangel.
0136hrs	<i>Olopana</i> sunk by <i>U-255</i> .	2200hrs	Dowding's convoy reaches Archangel.
1630hrs	Dowding's convoy encounters pack ice off Cape Kanin.	Thurs, 16 July	
Thurs, 9 July		0800hrs	Dowding leaves Archangel with three corvettes, bound for Novaya Zemlya.
1640hrs	Unsuccessful U-boat attack on Dowding's convoy.	Sat, 18 July	
1700hrs	<i>Bellingham</i> and <i>Rathlin</i> arrive in Archangel, the first PQ-17 ships to do so.	1730hrs	Dowding arrives in Matochkin Strait, to find several vessels there.
1725hrs	<i>Hoosier</i> crippled in air attack. Later sunk by <i>U-376</i> .	Mon, 20 July	
Fri, 10 July		1115hrs	Dowding's new convoy leaves Matochkin Strait, bound for Archangel.
0156hrs	<i>El Capitan</i> crippled in air attack. Sunk by <i>U-251</i> at 0300hrs.	Fri, 24 July	
0410hrs	<i>Zamalek</i> damaged in air attack off Russian coast.	1630hrs	Dowding's convoy arrives safely in Archangel.
1700hrs	<i>Ayrshire</i> and its three merchantmen arrive in Matochkin Strait.	Tues, 28 July	
			<i>Winston Salem</i> towed into Archangel, the last PQ-17 merchantman to arrive.

ORIGINS OF THE CAMPAIGN

Operation *Barbarossa*, the Axis invasion of the Soviet Union, had gone well for the attackers. Although the German advance had been halted at the gates of Moscow and Leningrad (now St. Petersburg), the German army had achieved spectacular successes, and despite setbacks during the winter, its commanders were planning a major summer offensive in southern Russia, which would capture the oilfields of the Caucasus, and reach the Volga, by capturing the strategically vital city of Stalingrad. The Germans controlled the entire coast of Europe, from the northern tip of Norway down to the French-Spanish border at the Pyrenees. However, with the start of the Arctic convoys the previous summer, Norway became the most strategically important section of this German-held coastline. Norway was a major prize for the Germans. As a forward naval and air base, it was perfectly placed to attack these Arctic convoys, and to harry Allied shipping coming within range of these airfields.

By necessity, the Arctic convoys had to sail past the northern tip of Norway, transiting the Barents Sea to reach the ports of Archangel or Murmansk. The Barents Sea extended eastwards from the southern tip of Spitzbergen, down through Bear Island to the north-western tip of Norway. To the north, a line of permanent pack ice extended all the way to the North Pole. This ice advanced and receded with the seasons, but its edge marked a northern boundary of the Barents Sea. Whatever the season, it still lay within range of German bombers. The Barents Sea, from 1942 on, became one of the most heavily contested naval battlegrounds of the war. Of course, there were other ways for the Allies to send military materiel to the Soviet Union. It could be shipped across the Pacific to Vladivostok in Siberia, or south around the southern tip of Africa to Basra on the Persian Gulf, which was connected to the Soviet Union by rail and road. At that time, the more direct route through the Suez Canal was impractical due to Axis air superiority in the central Mediterranean.

Both of these alternative routes had their drawbacks. The Vladivostok route was open to interdiction by the Japanese, although Soviet-flagged vessels were safe, as Japan and the Soviet Union were not at war. However, it was the longest of the three possible routes, if you added on the need for the Soviets to transport the supplies through Siberia to the front line. The Persian route was almost as lengthy, and a merchant ship sailing from a US port would take around ten weeks to reach its destination. This placed a major drain on mercantile resources, at a time when merchant shipping was still being sunk in appreciable numbers in the Atlantic. So, that left the shortest and most dangerous of the three options – the passage through Arctic waters.

As First Sea Lord, Admiral of the Fleet Sir Dudley Pound was a man burdened with great responsibility. By mid-1942, this pressure, together with his fast-declining health, made this highly experienced naval officer more fallible than usual.



The Soviets themselves preferred it, too, as it meant the war materiel they received could be transported and distributed relatively quickly. The least popular option for the Soviets was the Persian route, as they were suspicious of Allied interference in the region, which they saw as lying within their political sphere of influence in Central Asia. In the summer of 1941, the decision to commence Arctic convoy operations was made by British Prime Minister Winston Churchill, with the approval of the US President Franklin D. Roosevelt. It began modestly in August 1941, when the seven-ship Dervish convoy made its way from Liverpool to Archangel, by way of Orkney and Iceland. Incidentally, one of these pioneering ships was the Royal Fleet Auxiliary (RFA) *Aldersdale*, a fleet oiler (tanker). It would also play its part in the story of Convoy PQ-17, 11 months later.

By September 1941, a convoy system had been worked out, which remained in use with minor modifications until the end of the war. Outbound (or eastward-bound) convoys were designated 'PQ', while homeward (or westward-bound) convoys became 'QP'. This designation remained in place until the following September, the last convoys using this designation being PQ-18 and QP-15. For the most part, the convoys gathered in Hvalfjörður (Whale Fjord) near Reykjavik in south-west Iceland, and then steamed through the Denmark Strait between Greenland and the west coast of Iceland. Once in the Greenland Sea, they headed north-east towards Jan Mayen

Island, then on to Bear Island to enter the Barents Sea. The convoys would keep as far away from the Norwegian coast as they could, before turning south towards either Archangel or Murmansk.

The seasonal advance and retreat of the Arctic pack ice had an impact on the route. In summer, when the pack ice had retreated to roughly the latitude of Spitzbergen, the convoys took a more northerly route, passing to the north of Bear Island. By mid-winter, the ice reached Bear Island, forcing the convoys to take a more southerly route. In addition, more pack ice blocking the White Sea, which led to Archangel, meant that the Arctic convoys had to head for Murmansk instead, which remained ice-free in winter. In either case, the primary threat came from German U-boats and bombers, including torpedo planes. The Luftwaffe's Luftflotte 5 (5th Air Fleet) had been sent to Norway with the principal aim of interdicting the Arctic convoys. Airfields in northern Norway, such as Bardufoss, Banak and Kirkenes, were well within bomber range of either convoy route, while long-range reconnaissance aircraft operating from Trondheim could range out over the Greenland Sea almost as far as Jan Mayen. The main killing ground, though, was the Barents Sea.

Similarly, the Kriegsmarine stationed a sizeable force of U-boats in northern Norway, with the major U-boat base being at Narvik. Forewarned by intelligence reports or by aerial reconnaissance, naval commanders in the Norwegian theatre could establish a U-boat patrol line lying across the expected path of the convoy. Then, once contact was made, the U-boats could shadow the convoy, and attack it whenever a suitable opportunity arose. The third threat posed by the Germans came from the Kriegsmarine's

Convoys drew their strength from both numbers and formation. The merchantmen were arrayed in a large rectangle of ships – in the case of PQ-17, this was nine ships wide and up to four deep. Each ship kept station a set distance from its neighbours, and the whole moving rectangle was protected by a ring of escorts. If this formation was broken, the merchant ships were left virtually defenceless.





Grossadmiral Erich Raeder, Commander-in-Chief of the Kriegsmarine, in his Berlin headquarters. While Raeder was ultimately responsible for all naval operations, he had to rely on others to carry out his orders, while he was also heavily constrained by the dictates of his own superior, Adolf Hitler, who was reluctant to deploy *Tirpitz* unless the risk to the battleship was minimal.

surface group. *Tirpitz* was usually based in the Faettenfjord near Trondheim, while another anchorage near Narvik was used by several smaller warships.

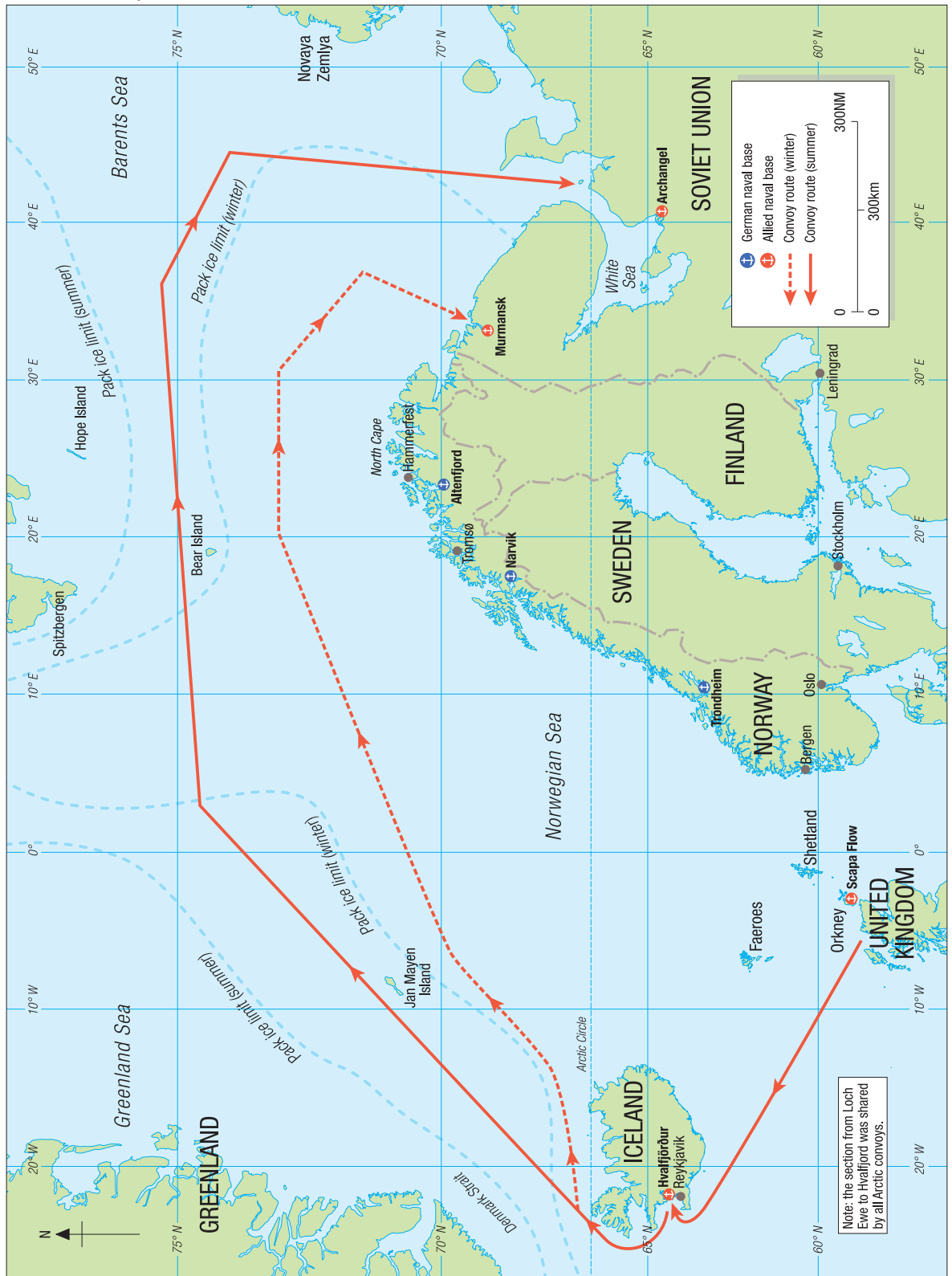
However, the Kriegsmarine also used a more northerly forward base in the Altenfjord, near Hammerfest and North Cape. A surface group based there was within easy reach of the convoys. Part of the growing alarm that gripped the British Admiralty during the PQ-17 operation was the move northwards by *Tirpitz* and other warships from Trondheim and Narvik to the Altenfjord. This, it felt, presaged an attack by a powerful German battlegroup, led by *Tirpitz*. It was rare for the Germans to conduct a sortie, as they were often constrained by risk-adverse operational orders, and by shortages of fuel. However, this powerful battlegroup remained a latent threat, and had to be factored into Allied plans.

Inevitably, the often hostile environment of the Arctic posed as much of a threat to the convoys as the Germans did. In summer, when PQ-17 sailed, the sun never really set, so the convoy was easily detected and shadowed by German patrol aircraft. Conditions then favoured

the Germans. By winter, it was the other way around – the convoys sailed in near-perpetual darkness, with only a sort of winter twilight providing a few hours of visibility in the middle of the day. Thick freezing mist was a problem in summer, and while it still existed in winter, the weather was far more challenging then, with winter storms making conditions dangerous and unpleasant for the mariners of both sides. It is little wonder that Allied merchant seamen never looked forward to taking part in an Arctic convoy. There was a reason Churchill described the voyage to northern Russia as ‘the worst journey in the world’.

In the summer of 1942, the need for these convoys was greater than ever. The Germans were preparing to launch their summer offensive, and Soviet leader Joseph Stalin was insistent that the Western Allies continue to help him by providing as much war materiel as they could spare. The previous convoy, PQ-16, which made the passage in May, was the largest so far, with 36 merchant ships. It was also the most costly, with seven ships being sunk, one to a U-boat and the rest in air attacks. So, for the next convoy, the Admiralty decided to strengthen the escort. However, warships were in short supply that summer, due to the Royal Navy’s commitment in the Mediterranean to run supplies through to Malta. Still, PQ-17, which was due to leave in late June, was well-protected, and for the first time its Covering Force included a sizeable US Navy contingent. The scene was set then, for what would become the best-known Arctic convoy operation of the war.

Arctic convoy routes, 1942



OPPOSING COMMANDERS

ALLIED

The highly able Admiral Sir John Tovey assumed command of the Royal Navy's Home Fleet in early 1941, and was responsible for bringing *Bismarck* to bay. In the Arctic convoy operations, he faced a much more complex series of challenges, which stretched the resources of his fleet to its limit.

All Arctic convoy operations were the responsibility of the British Admiralty, based in London's Whitehall. At its head was the First Lord of the Admiralty Albert Alexander. He was a political appointee, a rare Labour member of Churchill's cabinet, but the real power in operational terms was the First Sea Lord and Chief of the Naval Staff, **Admiral of the Fleet Sir Dudley Pound** (1877–1943). He joined the Royal Navy in 1891, and during World War I he commanded the dreadnought *Colossus*, which fought at Jutland (1916). Afterwards, during the last years of the war,

he was involved in operational planning at the Admiralty. He attained flag rank in 1926, and rose steadily, until as an admiral he became Commander-in-Chief of the prestigious Mediterranean Fleet. In June 1939, he returned to the Admiralty as First Sea Lord, although by then his health was in decline. He worked closely with Churchill, but he developed a reputation for over-managing his subordinates.

His period in office saw both naval successes and setbacks, but it was his handling of Convoy PQ-17 that led to a widespread questioning of his abilities, especially in the face of his steadily declining health. By July, he was seconded by a deputy, the Vice Chief of the Naval Staff, Vice-Admiral Sir Henry Moore. After the operation, Moore regretted not guiding Pound more effectively when the decision to scatter was made.



The operation level command charged with carrying out these Arctic operations was the Home Fleet, based in Scapa Flow. In July 1942, **Admiral Sir John Tovey** (1885–1971) was the man who masterminded the hunt for *Bismarck* in May 1941, and had supervised Arctic convoy operations since their inception. He had first distinguished himself as a destroyer captain at Jutland and rose steadily through the ranks.

Tovey was a skilled professional seaman, but he and Pound were often at odds, as Tovey disliked his superior's habit of interfering in his operations, or even his bypassing of Tovey completely to communicate with Tovey's subordinates. Chief of these, and commander of the Cruiser Covering Force, was **Rear Admiral Louis Hamilton** (1890–1957), who had seen service on destroyers during World War I, and, during the inter-war years, had remained with destroyers, until promoted to staff appointments and the command of a cruiser. He remained with cruisers during the early war years, seeing action off Norway, and attained flag rank in early 1941. Although not regarded as a thinking commander like Tovey, Hamilton was skilled, intuitive and aggressive. During the PQ-17 operation, he obeyed orders, but was accused of cowardice by the press, and Churchill attempted to use him as a scapegoat. Afterwards he was sidelined, but was knighted and ended the war as a vice-admiral.

The two men on the spot with PQ-17 were **Acting Captain John 'Jack' Broome** (1901–85), commander of the Close Escort, and the previously retired **Captain John 'Jack' Dowding** (1891–1965), the convoy commodore. Broome first rose to prominence commanding a destroyer in the Baltic during the Russian Civil War, but in the early 1920s he specialized in submarines, remaining with the silent service until the coming of war. He was then sent to command escorts, and so became skilled in anti-submarine warfare. Although a commander, and the current commander of the destroyer *Keppel*, he was given the rank of acting captain in February 1942, and the job of Close Escort commander for PQ-17. He performed well at this task, but afterwards was criticized for his actions – charges that, when investigated, proved groundless. Broome then went on to command escort carriers in the same Arctic waters.

Convoy Commodore Jack Dowding served in the Navy during World War I, seeing service in the Mediterranean and in the Northern Patrol base in Orkney. He left the service after the war and joined the merchant service. However, in 1939, he was recalled, and appointed a Commander Royal Navy Reserve (RNR). He was involved in the evacuation from Dunkirk, and was promoted to captain RNR, before being chosen as a convoy commodore. His combination of naval and merchant marine service made him well-suited to the task, and in the autumn of 1941, he commanded the first Arctic convoy. In the PQ-17 operation, he was one of the few British commanders who emerged from the debacle with an enhanced reputation, largely through his efforts to save the scattered remnants of the convoy.



Rear Admiral Louis Hamilton, commander of the Cruiser Covering Force, was confident that his force of four British and American heavy cruisers could defeat the two German 'pocket battleships', and even the *Admiral Hipper* as well. However, he realized they were no match for *Tirpitz*, unless it could be somehow damaged first.

Commander (Acting Captain) 'Jack' Broome, pictured here (top left) on the bridge of his destroyer HMS *Keppel*, was the Close Escort commander for Convoy PQ-17. After driving off four air attacks, he was confident the convoy would make it all the way through. The order to scatter came as an immense shock to Broome and his men.



Although he and Broome never openly criticized the Admiralty for the disaster, the outcome of the scattering could have been decidedly worse were it not for their actions.

GERMAN

For the Germans, operational command was fragmented due to a lack of co-operation between the Kriegsmarine and the Luftwaffe. In the Kriegsmarine, the Commander-in-Chief was **Grossadmiral Erich Raeder** (1876–1960), whose Oberkommando der Marine (OKM, or Naval High Command) was based in Berlin. During World War I, Raeder saw action at Jutland, serving as chief of staff to Vizeadmiral Hipper. After the war, he became an admiral in the Weimar Republic's navy, and assumed command of the Kriegsmarine when it was formed in 1936. As a commander, his aggression was tempered by Adolf Hitler, who insisted that all naval operations were approved by him first. Raeder was a gifted and highly professional naval commander who was shackled closely to an amateur commander-in-chief.

In 1942, the spearhead of the Kriegsmarine was the *Flottenkommando* (Fleet Command) under **Admiral Otto Schniewind** (1887–1964), who flew his flag in *Tirpitz*. Under him was Vizeadmiral Oskar Kummetz, Schniewind's deputy and *Befehlshaber der Kreuzer* (Commander of Cruisers), and a *Führer der Zerstörer* (Destroyer Leader), who held the rank of *Kapitän* (Captain). Schniewind had commanded torpedo boats (destroyers) at Jutland, and afterwards, in 1919, he planned the scuttling of the German battlefleet in Scapa Flow. He remained in the service, and by 1940, he had risen to the rank of *Vizeadmiral*. Then, following the death of Admiral Lütjens aboard *Bismarck*, Schniewind replaced him as *Flottenchef* (Fleet Commander). He was a pragmatic and capable officer, but he lacked the aggression of his predecessor.



Admiral Otto Schniewind (centre), the Kriegsmarine's *Flottenchef* (Fleet Commander), pictured during a visit by Grossadmiral Raeder (left) to his flagship *Tirpitz*. On the right is Vizeadmiral Kummetz, who commanded the battlegroup's cruiser force. It was Schniewind who masterminded Operation *Rösselsprung*, and who would carry it out.

Usually, the chain of command between Raeder and Schniewind passed through an intermediary level, the Marinegruppenkommando Nord (MGK Nord, or Naval Group Command North) based at Sengwarden near Wilhelmshaven. It was commanded by **Generaladmiral Rolf Carls** (1885–1945), another World War I veteran. It was Carls who had planned the Kriegsmarine's part in the invasion of Denmark and Norway, and the naval element of Operation *Barbarossa*. Theoretically, his command included all naval forces in Norway, operating through Generaladmiral Hermann Boehm (1884–1972), Kommandierender Admiral Norwegen (Commanding Admiral Norway), who was based in Oslo. Boehm, though, played no real part in the PQ-17 campaign, save to provide administrative support.

Boehm's command was divided into four areas, the most northerly of which was run by Admiral Arktis (Admiral Arctic) **Admiral Hubert Schmudt** (1888–1984) from his headquarters near Kirkenes. For the sake of efficiency, during Arctic convoy operations, Schmudt's command was made directly subordinate to Carls. Schmudt, a former torpedo boat commander, reached flag rank in 1938. He was an intelligent and decisive officer, and took the lead in improving inter-service communications with the Luftwaffe in Norway. Schmudt also co-ordinated U-boat operations in the Barents Sea, working in conjunction with Korvettenkapitän (Frigate Captain) Hans Cohausz, commander of the 11th 'Polar Bear' U-boat Flotilla, based in Bergen.

As for the Luftwaffe, **General Hans-Jürgen Stumpff** (1889–1968) commanded Luftflotte 5, based in Oslo. He was a staff officer during World



ABOVE LEFT

As the commander of MGK Nord, based near Wilhelmshaven, Generaladmiral Rolf Carls had the task of liaising between the *Flottenchef* aboard *Tirpitz* and his superiors in Berlin. It was an unenviable position, as responsibility for the Kriegsmarine's powerful surface force in Norwegian waters rested on Carls' shoulders, while operational command was in the hands of another, Admiral Schniewind.

ABOVE RIGHT

During the PQ-17 campaign, General Hans-Jürgen Stumpff commanded Luftflotte 5 from a Luftwaffe forward headquarters near Kirkenes in the far north of Norway. He was on hand to direct and encourage his air groups to continue their searches and attacks until as many merchant ships as possible had been destroyed.



War I, and a military administrator in the inter-war years, but in 1933, he was transferred to the nascent Luftwaffe. By 1940, he was given command of the *Luftflotte* and supported the invasion of Norway. By the summer of 1942, Stumpff's command was divided into three *Fliegerführer* (Ff, or Air Leader) commands: Ff Nord (West) based at Trondheim, Ff Lofoten at Bardufoss, which conducted long-range attacks on the Arctic convoys, and Ff Nord (Ost) at Kirkenes, supervising operations over the Barents Sea. All fighters in Stumpff's command came under a separate command based near Stavanger. For Arctic convoy operations, Stumpff supervised operations from a forward headquarters near Kirkenes.

Usually, co-operation between the Kriegsmarine and the Luftwaffe was poor, but Schmundt and Stumpff both encouraged greater co-operation. Liaison officers were posted between the *Luftflotte* and the Admiral Arktis headquarters, which improved communications. In theory, during the campaign, sighting reports by both U-boats and aircraft were shared. However, these still had to be processed through their own service channels, which often led to excessive delays before they were passed on. It did not help that the two services used different radio frequencies and codes, making communication harder than it needed to be.

OPPOSING FORCES

ALLIED

The system used to protect Arctic convoys had been developed the previous autumn, and so by July 1942, it was well organized. The convoy itself was deployed in a standard way, with all merchant ships allocated a position within its formation. These merchantmen were commanded by a convoy commodore, who flew his broad pennant in one of the merchant ships in the centre of the convoy's front row of ships. Assisted by a small signals staff, he would issue orders, such as course and speed changes, warn of impending attacks, and any other emergency signals. In Convoy PQ-17, there were 36 merchant ships, deployed in nine columns and four rows, to create a large rectangle of shipping, some 5nm across and 1nm deep. Each merchant



When it first entered service in early 1941, the British Illustrious-class aircraft carrier HMS *Victorious* had played a part in the hunt for *Bismarck*. A little over a year later, its presence in Arctic waters was enough to make Hitler hesitant about allowing *Tirpitz* to sortie against PQ-17, unless the carrier was too far away to intervene.



ship was protected by some form of armament, usually an old 4in. gun, crewed by military or naval gunners, and a handful of light anti-aircraft (AA) guns. In PQ-17, this total included two RFA tankers, which were used to replenish the escorts during the voyage. Also part of the convoy were three rescue ships, *Rathlin*, *Zamalek* and *Zaafaran*, all converted from merchant ships. These were an innovation designed to speed up the rescue of survivors in the event of a merchantman being torpedoed.

Three groups of warships protected the convoy. The first

The King George V-class battleship HMS *Duke of York*, pictured in Scapa Flow in late 1942. That previous summer, the battleship served as Admiral Tovey's flagship, leading the Distant Covering Force deployed to provide support to Convoy PQ-17 in the event that the German surface fleet put to sea.

of these was the Close Escort (or Ocean Escort), made up of smaller warships and escort vessels, which would accompany the convoy all the way to Archangel. For PQ-17, these were commanded by Captain Broome, commander of the destroyer *Keppel*. It consisted of a powerful little force of five destroyers and escort destroyers, three minesweepers, four corvettes and four armed trawlers, which had been converted into anti-submarine warfare (ASW) vessels. Also present were two auxiliary AA ships (often called 'ack-ack' ships by the British), which were converted from merchant vessels, and were roughly the size of destroyers, only with a much stronger AA armament. The whole Close Escort was designed to provide a good mixture of all-round AA and ASW protection. It was deployed in a ring around the convoy, with each escort having its allotted position. If required, Broome could detach escorts to hunt U-boats spotted some distance from the convoy. In addition, two British submarines accompanied the convoy, to serve as another line of defence if a surface threat developed, and to act as guides to stragglers.

The other two warship groups protected the convoy and its Close Escort. The first of these, the Covering Force (or Cruiser Covering Force), commanded by Rear Admiral Hamilton, was designed to support the convoy in the event of a surface attack by German cruisers and destroyers. Hamilton was accompanied by an American detachment from US Navy Task Force 39. The Covering Force would accompany the convoy into the Barents Sea, at which point the likelihood was that it would be withdrawn, to reduce its exposure to air and U-boat attack. However, if a German surface attack was thought imminent, it could, on the approval of Admiral Tovey, remain with the convoy to repel the enemy. Hamilton was sanguine that he could deal with any German attack unless *Tirpitz* put to sea. In that case, his cruisers and destroyers would be unable to protect themselves, let alone the convoy.

In the event *Tirpitz* did sortie, Admiral Tovey was at sea with a Distant Covering Force. It was made up of two battleships (one British and one American), and the aircraft carrier *Victorious*. The previous year, aircraft from *Victorious* had attacked *Tirpitz* off the Lofoten Islands, and so they posed a significant risk to the German battleship. If *Tirpitz* was damaged in a naval air strike, then the German battleship might well be unable to escape

back to Norway before being overhauled by Tovey's battleships. However, Tovey was under orders from the Admiralty to remain in the Greenland Sea, and not to pass east of Bear Island unless it was confirmed that *Tirpitz* had put to sea, and that there was a clear possibility of bringing it to battle.

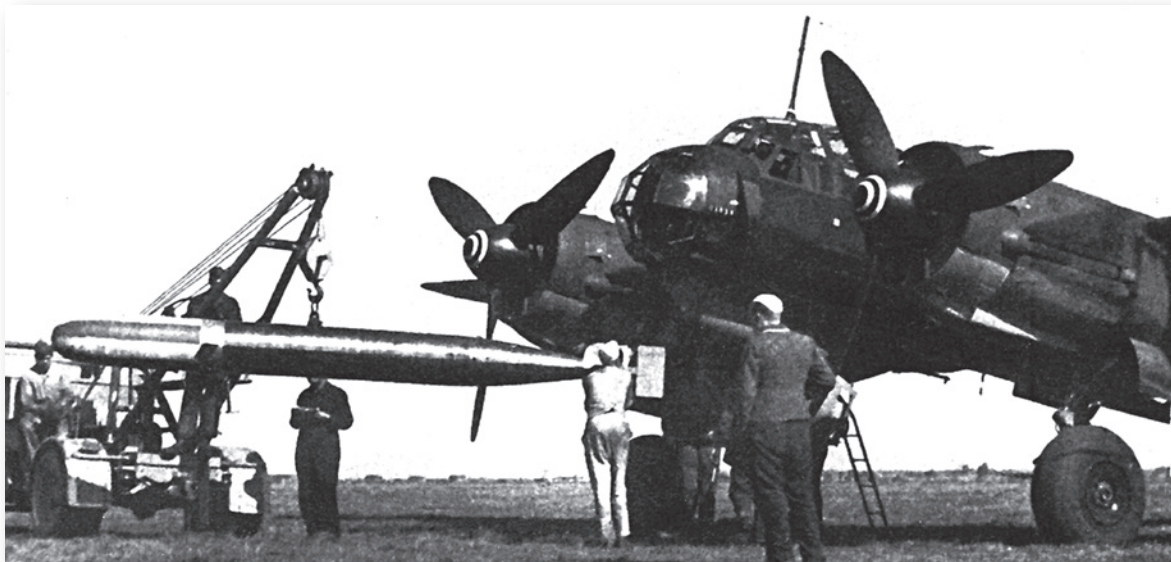
GERMAN

The greatest threat to Convoy PQ-17 came from the Luftwaffe. The primary role of Luftflotte 5 stationed in Norway was to attack the Arctic convoys. During previous convoys, the *Luftflotte* had developed an effective way of locating and attacking convoys in the Barents Sea. Initially, long-range maritime reconnaissance could be conducted over the Greenland Sea, ranging as far west as Jan Mayen Island. This task was allocated to the Bv 138 floatplanes of Küstenfliegergruppen (KüFlGr or Coastal Aviation Group) 406 and 906, which were attached to the Air Leader Lofoten Command. These aircraft (nicknamed 'Shads' by the Allies after the fish found off North America's Atlantic coast) would locate a convoy, and then shadow it, sending back sighting reports. Then, the He 115 floatplanes from the same two commands could carry out long-range aerial torpedo attacks on the convoy as it drew closer to Bear Island.

Once within the confines of the Barents Sea, Luftflotte 5 could unleash its Junkers Ju 88 medium bombers and Heinkel He 111 heavy bombers to pound the convoy. The Heinkels could carry either bombs or aerial torpedoes. The *Luftflotte* also included a number of Junkers Ju 87 Stuka dive-bombers, but given the Allied propensity to skirt the pack ice as far from the Norwegian coast as they could, these generally lacked the range needed to participate in these air attacks. Instead, they were usually reserved for operations closer to shore, such as the seaward approaches to Murmansk, or to take part in ground-attack operations on the land front in the Arctic. Similarly, although the *Luftflotte* contained a sizeable number of fighters, unless a British carrier ventured into the Barents Sea, then these



The German Heinkel He 111 medium bombers of Luftflotte 5 saw action during the Battle of Britain, but by mid-1942, they had been adapted and their crews retrained for anti-ship missions. The He 111 was capable of operating as either a conventional bomber or as a torpedo-carrying one.



A German Junkers Ju 88A bomber being fitted with an aerial torpedo. Although this photograph was taken in the Mediterranean, the same scene was played out in northern Norway, during the air attacks by KG-30 on PQ-17.

were of little use in operations against the Arctic convoys. So, attacks on PQ-17 were limited to ones by the two types of Heinkels and the larger type of Junkers in the Luftflotte's ranks.

The threat posed by the Kriegsmarine was primarily a U-boat one. The 11th U-Boat Flotilla was a front-line command, based in Bergen in central Norway. However, for the most part, it operated from a forward base at Narvik, and its subsidiary moorings nearby at Skjomenfjord and Harstad. Another base at Trondheim, earmarked for the 13th U-boat Flotilla, was also used, as was the Neidenfjord near Kirkenes. The flotilla was commanded by Korvettenkapitän (Corvette Captain) Hans Cohausz, and consisted of a varying number of U-boats, all of them Type VIIC vessels.

These carried a crew of 44 to 52 men, and were fitted with four bow tubes and a single stern one. In all, they carried up to 14 torpedoes. They were also armed with an 88mm deck gun, which was supplied with 220 rounds. Most also carried a 20mm AA gun, although the fittings used varied from boat to boat. These Type VII boats could make 17 knots on the surface, but just seven knots when submerged. This meant they could shadow a convoy, but once forced to submerge, they were unable to keep up with it. For this reason, attacks were usually made at night on the surface. If it did attack when submerged, the U-boat only did so after taking up an advantageous position ahead of the target. They had an operational range of around 8,500nm, which was more than adequate for these Arctic operations, and could usually remain at sea for a month before returning to port.

For the operation against Convoy PQ-17, the flotilla's boats were formed into a wolfpack, appropriately called *Eisteufel* ('Ice Devil'), which existed as a formation from 1 to 12 July. In all, ten U-boats joined the wolfpack, while U-703 was unofficially seconded to it, for a total of 11 Type VIIC U-boats.

The Kriegsmarine surface force that was earmarked to attack Convoy PQ-17 was commanded by the *Flottenchef*, Admiral Schniewind, and was divided into two battlegroups. The first, centred on the battleship *Tirpitz*, was based in the Trondheimsfjord, with *Tirpitz* moored in the small Faettenfjord, and the other warships berthed nearby. These included the powerful heavy



The German armoured cruiser KMS *Admiral Scheer*, together with sister ship KMS *Lützow* (formerly *Deutschland*), were purpose-built for attacking enemy merchant shipping. Due to their powerful armament of 28cm (11in.) guns, the British dubbed them 'pocket battleships'.

cruiser *Admiral Hipper*, as well as seven destroyers and torpedo boats. The second battlegroup, under the command of Vizeadmiral Otto Ciliak, was based at Narvik. It consisted of the armoured cruisers *Lützow* and *Admiral Scheer* and eight destroyers. In addition, the fleet oiler *Dithmarschen* was attached to the whole force, to refuel the destroyers after the warships were moved north to the Altenfjord, near North Cape. In its entirety, this force was powerful enough to destroy the convoy, its close escorts and the Cruiser Covering Force, if it was given the chance to sortie.



The battleship KMS *Tirpitz*, pictured in the Faettenfjord near Trondheim in early 1942. The sister ship of the ill-fated KMS *Bismarck*, *Tirpitz* carried the same main armament of eight 38cm (15in.) guns, supported by powerful secondary and flak batteries, and a highly efficient fire control system. If *Tirpitz* put to sea against a convoy, the Allies would be hard pressed to bring the battleship to bay.

ORDERS OF BATTLE

ALLIED

Merchant Ships (36)

Vessel	Nationality	Tonnage	Date Built	Fate
<i>SS Alcoa Ranger</i>	US	5,116	1919	Sunk by <i>U-255</i> , 7 July
<i>MV Azerbaijan</i>	Soviet	6,114	1932	Reached port
<i>SS Bellingham</i>	US	5,345	1920	Reached port
<i>SS Benjamin Harrison</i>	US	7,191	1942	Reached port
<i>SS Bolton Castle</i>	UK	5,203	1939	Sunk in air attack, 5 July
<i>SS Carlton</i>	US	5,127	1920	Sunk by <i>U-88</i> , 5 July
<i>SS Christopher Newport</i>	US	7,191	1942	Sunk by <i>U-457</i> , 4 July
<i>SS Daniel Morgan</i>	US	7,177	1942	Sunk by <i>U-88</i> , 5 July
<i>MV Donbass</i>	Soviet	7,925	1935	Reached port
<i>SS Earlston</i>	UK	7,195	1941	Sunk by <i>U-334</i> , 5 July
<i>SS El Capitan</i>	Panama	5,255	1917	Sunk by <i>U-251</i> , 10 July
<i>SS Empire Byron</i>	UK	6,645	1941	Sunk by <i>U-703</i> , 5 July
<i>SS Empire Tide</i>	UK	6,978	1941	Reached port
<i>SS Exford</i>	US	4,969	1919	Returned to Iceland
<i>SS Fairfield City</i>	US	5,686	1920	Sunk in air attack, 5 July
<i>SS Hartlebury</i>	UK	5,082	1934	Sunk by <i>U-355</i> , 7 July
<i>SS Honomu</i>	US	6,977	1919	Sunk by <i>U-456</i> , 5 July
<i>SS Hoosier</i>	US	5,060	1920	Sunk by <i>U-376</i> , 10 July
<i>SS Ironclad</i>	US	5,685	1919	Reached port
<i>SS John Weatherspoon</i>	US	7,191	1942	Sunk by <i>U-255</i> , 6 July
<i>SS Navarino</i>	UK	4,841	1936	Sunk in air attack, 5 July
<i>SS Ocean Freedom</i>	UK	7,173	1942	Reached port
<i>SS Olopana</i>	US	6,069	1920	Sunk by <i>U-255</i> , 8 July
<i>SS Pan Atlantic</i>	US	5,411	1919	Sunk by aircraft, 6 July
<i>SS Pan Kraft</i>	US	5,644	1919	Sunk by aircraft, 7 July
<i>SS Paulus Potter</i>	Netherlands	7,268	1942	Sunk by <i>U-255</i> , 13 July
<i>SS Peter Kerr</i>	US	6,476	1920	Sunk by aircraft, 5 July
<i>SS Richard Bland</i>	US	7,191	1942	Returned to Iceland
<i>SS River Afton</i>	UK	5,479	1935	Sunk by <i>U-703</i> , 5 July
<i>SS Samuel Chase</i>	US	7,191	1942	Reached port
<i>SS Silver Sword</i>	US	4,936	1920	Reached port
<i>SS Troubador</i>	US	6,428	1920	Reached port
<i>SS Washington</i>	US	5,564	1919	Sunk by aircraft, 5 July
<i>SS West Gotomska</i>	US	5,728	1919	Returned to Iceland
<i>SS William Hooper</i>	US	7,177	1942	Sunk by <i>U-334</i> , 4 July
<i>SS Winston-Salem</i>	US	6,223	1920	Reached port

Auxiliary Vessels – accompanying convoy

Vessel	Type	Tonnage	Fate
RFA <i>Aldersdale</i>	Replenishment Oiler	8,402	Sunk by U-255, 7 July
RFA <i>Grey Ranger</i>	"	3,313	Returned to Iceland
SS <i>Rathlin</i>	Rescue Ship	1,600	Reached port
SS <i>Zaafaran</i>	"	1,559	Sunk by aircraft, 5 July
SS <i>Zamalek</i>	"	1,567	Reached port

Convoy Close Escort (Commander [Acting Captain] Jack Broome, HMS *Keppel*)

Initial Force

Minesweepers (3, all Halcyon class)	HMS <i>Britomart</i>	Lt. Cdr. Stammwitz
	HMS <i>Halcyon</i>	Lt. Cdr. Corbet-Singleton
	HMS <i>Salamander</i>	Lt. Muttram
Auxiliary AA Ships (2)	HMS <i>Palomares</i>	Capt. Jauncey RN (rtd)
	HMS <i>Pozarica</i>	Capt. Lawford RN (rtd)
ASW Trawlers (4)	HMT <i>Ayrshire</i>	Lt. Gradwell RNVR
	HMT <i>Lord Austin</i>	Lt. Egjar RNR
	HMT <i>Lord Middleton</i>	Lt. Jameson RNR
	HMT <i>Northern Gem</i>	Lt. Mullender RNR
Submarine	HMS <i>P-615</i> [P-611 class]	Lt. Newstead

Reinforcements (joined at sea, 30 June)

Destroyer Flotilla Leader (1)	HMS <i>Keppel</i> [Shakespeare class] (flagship)	Capt. Broome
Destroyers (3)	HMS <i>Fury</i> [E/F class]	Lt. Cdr. Campbell
	HMS <i>Leamington</i> [Town class]	Lt. L'Anson
	HMS <i>Offa</i> [O/P class]	Lt. Cdr. Ewing
Escort Destroyers (2, all Hunt class, Type 2)	HMS <i>Ledbury</i>	Lt. Cdr. Hill
	HMS <i>Wilton</i>	Lt. Northey
Corvettes (4, all Flower class)	HMS <i>Dianella</i>	Lt. Rankin RNR
	HMS <i>La Malouine</i>	Lt. Bidwell RNR
	HMS <i>Lotus</i>	Lt. Hall RNR
	HMS <i>Poppy</i>	Lt. Boyd RNR
Submarine (1)	HMS <i>P-614</i> [P-611 class]	Lt. Beckley

Cruiser Covering Force (Rear Admiral Louis Hamilton, HMS *London*)

Heavy Cruisers (4)	HMS <i>London</i> [County class] (flagship, R. Adm. Hamilton)	Capt. Servais
	HMS <i>Norfolk</i> [County class]	Capt. Bellars
	USS <i>Tuscaloosa</i> [New Orleans class]	Capt. Johnson USN
	USS <i>Wichita</i> [Wichita class]	Capt. Hill USN
Destroyers (3)	HMS <i>Somali</i> [Tribal class]	Capt. Eaton
	USS <i>Rowan</i> [Benham class]	Lt. Cdr. Harrison USN
	USS <i>Wainwright</i> [Sims class]	Lt. Cdr. Gibbs USN

Distant Covering Force (Admiral Sir John Tovey, HMS *Duke of York*)

Battleships (2)	HMS <i>Duke of York</i> [King George V class] (flagship, Adm. Tovey)	Capt. Harcourt
	USS <i>Washington</i> [North Carolina class] (flagship, R. Adm. Giffen USN)	Capt. Benson USN
Aircraft Carrier (1)	HMS <i>Victorious</i> [Illustrious class] (flagship, V. Adm. Fraser)	Capt. Bovell
Cruisers (2)	HMS <i>Cumberland</i> [County-class heavy cruiser]	Capt. Maxwell-Hyslop
	HMS <i>Nigeria</i> [Fiji-class light cruiser] (flagship, R. Adm. Burrough)	Capt. Paton
Destroyers (9)	HMS <i>Faulknor</i> [E/F-class leader]	Capt. Scott-Moncrieff, 8th Destroyer Flotilla
	HMS <i>Escapade</i> [E/F class]	Lt. Cdr. Currey
	HMS <i>Ashanti</i> [Tribal class]	Cdr. Onslow
	HMS <i>Onslow</i> [O/P class]	Capt. Armstrong, 17th Destroyer Flotilla
	HMS <i>Onslaught</i> [O/P class]	Cdr. Selby
	HMS <i>Marne</i> [L/M class]	Lt. Cdr. Richardson
	HMS <i>Martin</i> [L/M class]	Cdr. Thomson, attached to 17th Destroyer Flotilla
	USS <i>Mayrant</i> [Benham class]	Cdr. Hartman USN
	USS <i>Rhind</i> [Benham class]	Lt. Cdr. Read USN
Escort Destroyers (3, all Hunt class, Type 2s, attached to 8th Destroyer Flotilla)	HMS <i>Blankney</i>	Lt. Cdr. Powlett
	HMS <i>Middleton</i>	Lt. Cdr. Kinloch
	HMS <i>Wheatland</i>	Lt. Cdr. Brooke

GERMAN

Battlegroup I (Admiral Otto Schniewind, KMS *Tirpitz*)

Battleship (1)	KMS <i>Tirpitz</i> [Bismarck class] (flagship, Adm. Schniewind)	Kap. Topp
Heavy Cruiser (1)	KMS <i>Admiral Hipper</i> [Hipper class]	Kap. Meisel
Destroyers (5)	KMS Z-4 <i>Richard Beitzel</i> [Type 1934]	
	KMS Z-6 <i>Theodor Riedel</i> [Type 1934A]	
	KMS Z-10 <i>Hans Lody</i> [Type 1934A]	
	KMS Z-14 <i>Friedrich Ihn</i> [Type 1934A]	
	KMS Z-20 <i>Karl Galster</i> [Type 1936]	
Torpedo Boats (2)	KMS T-7 [Type 1935]	
	KMS T-15 [Type 1935]	

Battlegroup II (Vizeadmiral Otto Ciliax, KMS *Lützow*)

Armoured Cruisers (2)	KMS <i>Lützow</i> [Deutschland class] (flagship, V. Adm. Ciliax)	Kap. Stange
	KMS <i>Admiral Scheer</i> [Deutschland class]	Kap. Meendsen-Bohlken
Destroyers (8)	KMS Z-15 <i>Erich Steinbrinck</i> [Type 1934A]	
	KMS Z-16 <i>Friedrich Eckoldt</i> [Type 1934A]	
	KMS Z-20 <i>Theodor Riedel</i> [Type 1936]	
	Z-24 [Type 1936A]	
	Z-27 [Type 1936A]	
	Z-28 [Type 1936A]	
	Z-29 [Type 1936A]	
	Z-30 [Type 1936A]	

Wolfpack Eisteufel

U-boat	Commander	Patrol Period	Base	Ships Sunk
<i>U-88</i>	Kptlt. Bohmann	17 June–11 July	Narvik	2
<i>U-251</i>	Kptlt. Timm	5–15 July	Skjomenfjord/Harstad	1
<i>U-255</i>	Kptlt. Reche	23 June–15 July	Narvik	4
<i>U-334</i>	Kptlt. Siemon	15 June–6 July	Trondheim/Neidenfjord	2
<i>U-355</i>	Kptlt. La Baume	16 June–12 July	Skjomenfjord/Narvik	1
<i>U-376</i>	Kptlt. Marks	7 June–15 July	Bergen/Narvik	1
<i>U-408</i>	Kptlt. von Hymmen	7 June–16 July	Skjomenfjord	-
<i>U-456</i>	Kptlt. Teichert	25 June–6 July	Bergen/Neidenfjord	1
<i>U-457</i>	Krvkt. Brandenburg	28 June–16 July	Trondheim/Narvik	2
<i>U-657</i>	Kptlt. Göllnitz	17 June–9 July	Trondheim/Skjomenfjord	-
<i>U-703</i>	Kptlt. Bielfeld	29 June–15 July	Bergen/Narvik	2

Luftflotte 5

General total aircraft	103 Ju 88 bombers
	42 He 111 torpedo bombers
	15 He 115 torpedo bombers (floatplanes)
	30 Ju 87 Stuka dive-bombers
	74 reconnaissance aircraft (Bv 138 floatplanes and Fw 200 Condors)
Kampfgeschwader (KG, or 'Bomber Wing') 26	
I/KG-26	14 He 111s
II/KG-26	13 He 111s
III/KG-26	15 He 111s
Kampfgeschwader 30	
I/KG-30	34 Ju 88As
II/KG-30	34 Ju 88As
III/KG-30	35 Ju 88As
Küstenfliegergruppe 406	
I/KüFlGr-406 and I/KüFlGr-906	15 He 115s
Stuka-Geschwader (StG) 26	
I/StG-26	30 Ju 87Bs

OPPOSING PLANS

ALLIED

A Royal Naval Asdic (or Sonar) operator in the Asdic room of a British escort. Detecting a submerged U-boat was something of an art, particularly in Arctic waters, where temperature variations and abundant marine life made accuracy more challenging than usual.



Allied plans for the Convoy PQ-17 operation followed an established pattern. It would sail from Iceland, while a homebound convoy, QP-13, would leave Archangel simultaneously. The two were expected to pass each other somewhere close to Jan Mayen Island. Each would be protected by a close escort, which would accompany them for the voyage.

The Western Allies were under intense pressure to ship war materiel to the Soviet Union, despite the risks, as the campaign on the Eastern Front was reaching a critical phase, and the embattled Soviet Army needed whatever support the Allies could provide. The problem, as far as both the Admiralty and the Commander-in-Chief, Home Fleet saw it, was that in midsummer, these convoys would be dangerously exposed to enemy air attacks, due to

the near-endless daylight. So, whatever the Allies could do to protect them, these convoys would have to run the Luftwaffe gauntlet of air attacks during the transit of the Barents Sea. It did not help that German intelligence, aided by spies in Iceland and aerial reconnaissance over the White Sea, would know exactly when these convoys put to sea.

In June, Tovey learned that the Germans intended to launch a powerful surface sortie against the next outbound convoy, PQ-17. It was expected this would happen in the Barents Sea, where the Kriegsmarine would enjoy friendly air cover. Both the Admiralty and Tovey were reluctant to risk their capital ships in these waters – to do so would be to invite their destruction. So, Tovey hoped for a chance to entice the German surface group to the west, beyond Bear Island. There, Tovey could enjoy air support from his own fleet carrier, while the Germans would be operating beyond the effective range of their own bombers. Tovey was even prepared to delay the passage of an eastbound convoy around Bear Island, if it helped draw the Germans out. While some merchant ship captains felt they were used as bait, this was not the case at all. The convoys had to sail regardless of any German activity. While it might be the target of a German sortie, Tovey never expected that Convoy PQ-17 would be put in real danger.

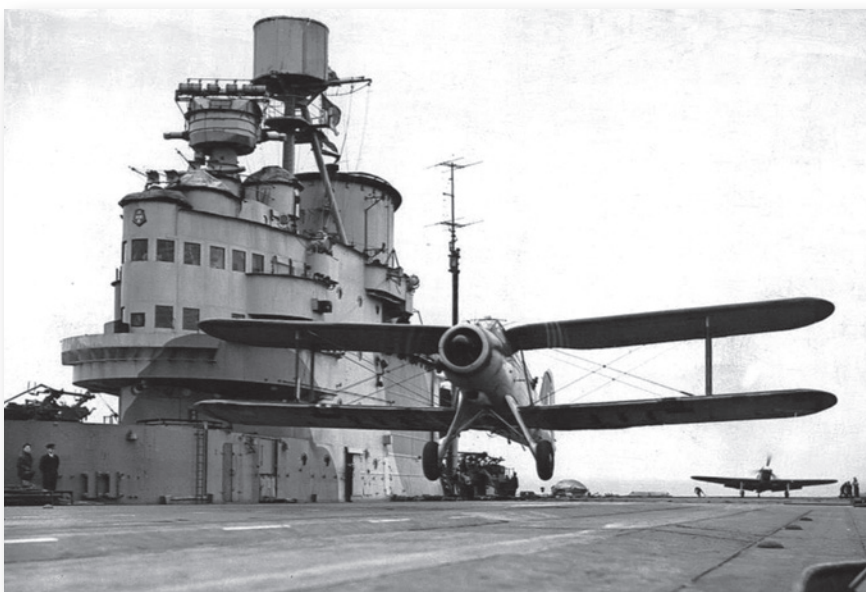
The Admiralty, however, rejected Tovey's plan. Its orders on 27 June stated that the convoy would continue on its course, unless in real danger, and would be escorted by the forces allocated to protect it – in effect the Close Escort and the Cruiser Covering Force. Much depended on being forewarned of a German sortie. As such, Tovey stationed a patrol line of nine submarines off North Cape, to sight the German battle squadrons if they put to sea. The Soviets also had submarines in the area, fulfilling a similar mission. Both Tovey and the Admiralty fully expected to receive reliable intelligence of German movements from the Ultra project, the decryption and analysis of German naval codes using the Enigma system. These decoders, based in Bletchley Park, should have known of any German movements in what amounted to real time. In other words, if *Tirpitz* raised anchor, the Admiralty would know about it within a few hours.

Much depended on Rear Admiral Hamilton and his Cruiser Covering Force. His primary objective was to safeguard the convoy, and make sure it made it through to Archangel. However, he knew that a spirited defence would be no use against *Tirpitz*, and so he fully expected the convoy to be temporarily turned around if the Germans put to sea, to reduce the risk of losses. If this happened, his primary job was to defend them, and if possible, delay the enemy and draw them westwards, so the Home Fleet could bring them to battle on favourable terms. In the meantime, the battlefleet would remain on station in the Greenland Sea, while awaiting developments. There would inevitably be a point where the convoy had passed beyond the reach of Tovey, and if *Tirpitz* sortied, it would be up to Hamilton to engage it. He was prepared to do this, if required, although this would be an extremely dangerous undertaking. Above all, though, the convoy had to be protected.

To support PQ-17, a dummy convoy was created in Scapa Flow, a ploy codenamed Operation *ES*, with the intention of convincing the Germans that an

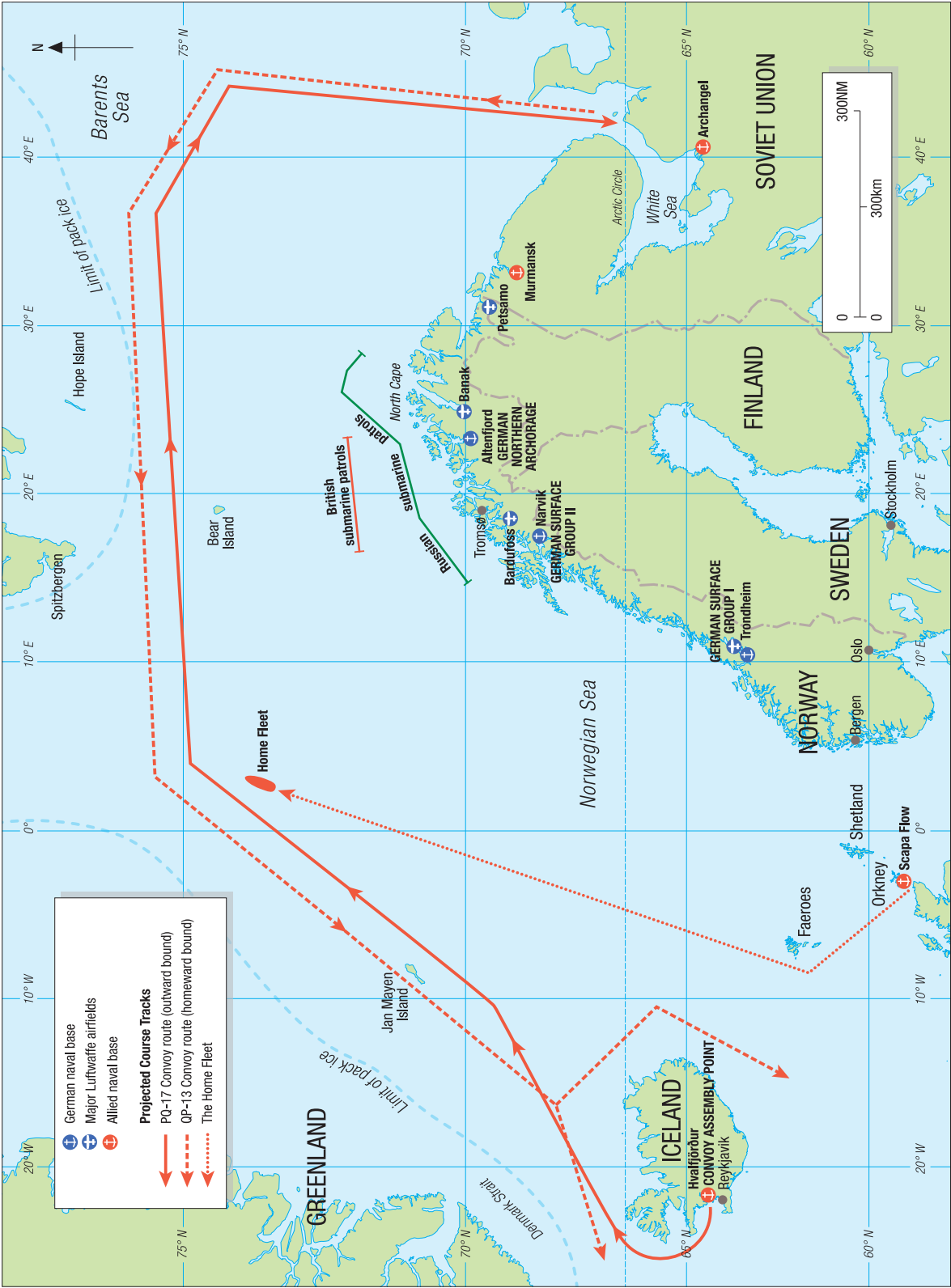


A German Enigma cypher machine. It was the breaking of the German naval cypher codes on this device that gave the British Admiralty a way of determining just when the Kriegsmarine planned to launch a sortie. Unfortunately, despite the codebreakers in Bletchley Park providing indications that a sortie was not under way, this information was ignored by the First Sea Lord when deciding how to react to the threat posed by Operation *Rösselsprung*.



A Fairey Albacore torpedo bomber landing on the flight deck of HMS *Victorious*. Earlier that summer, Albacores from the carrier had attacked *Tirpitz*. Now, during the PQ-17 operation, 21 of these torpedo bombers, from 817 and 832 Naval Air Squadrons (NAS), were primed to do so again, if their aircrews were given the opportunity. At the time, the carrier also carried nine Fairey Fulmar fighters of 809 NAS.

The Allied operational plan, June–July 1942



amphibious assault on Norway was planned. This 'convoy' would consist of five ships drawn from the 1st Mining Squadron, augmented by four coal-carrying auxiliary ships. They would be escorted by the AA cruisers *Sirius* and *Curacoa*, five destroyers and four ASW trawlers. It would sail before PQ-17 departed from Iceland and sortied into the Norwegian Sea, where it would linger before returning to Orkney. The hope was that it would be spotted, and the Germans would redeploy their surface units, U-boats and aircraft to counter any potential landings in southern Norway. To support the deception, bombing raids were conducted around Bergen. The Germans, though, refused to be drawn in, and the operation had absolutely no effect on the fate of PQ-17.

GERMAN

German plans for a sortie by a powerful surface force against the Arctic convoys had been developed during the winter of 1941–42 at the behest of Generaladmiral Carls at MGK Nord. On 4 June, operational instructions were issued to the German surface forces based around Trondheim and Narvik for their movement to the Altenfjord. There, they would stand in readiness for a sortie against the next eastbound convoy – PQ-17. The Germans were well aware of the formation the convoys and their close escorts used, and roughly what warships might be present. They also knew the likely route it would take, keeping as far north as it could to the pack ice after passing Bear Island and entering the Barents Sea. So, it was left to Schniewind and his staff to develop their own plans, carry out an attack on the convoy, and deal with any Distant Covering Force that might be in the vicinity. This operation was duly codenamed Operation *Rösselsprung* (translating as the 'knight's move' in chess).

For the move to the Altenfjord, operation control of the Trondheim group (Battlegroup I) was retained by MKG Nord, while Admiral Arktis controlled the Narvik group (Battlegroup II). However, Schniewind and his deputy Ciliac would retain tactical control of their battlegroups if contact was made with the enemy. Once in the Altenfjord, Generaladmiral Carls would assume operational control, and the *Flottenchef* would assume tactical control of both battlegroups. Admiral Arktis would merely serve as a link between the *Flottenchef* and wolfpack Eisteufel. The operational plan for *Rösselsprung* also called for the deployment of this wolfpack in a patrol line across the likely path of the convoy, to the west of Bear Island. On locating the convoy, and any supporting forces, the U-boats would shadow the Allied units, and send sighting reports to Admiral Schmudt, aboard his command ship *Tanga* moored off Kirkenes.

A German U-boat at sea. The Type VIIC boats, the model used in the attacks on PQ-17, were primarily designed to operate on the surface. Although they lacked radar, they could spot and shadow a convoy from a distance. Their small size also made them difficult to detect on the surface.



The real key to the success of this operation depended on timing. This was something that could not be exactly predicted, as it depended on obtaining accurate and timely sightings of the convoy, and the efficient and rapid transmission of information, orders and instructions between Schniewind, Schmundt and Carls. As any sortie had to be approved by Hitler, this also meant involving Raeder in Berlin, and the Kriegsmarine's representative at Hitler's headquarters, Konteradmiral (Rear Admiral) Kracke. In the end, it was this need to seek Hitler's approval that led to the late launch of the operation, and its subsequent cancellation.

As for the tactical part of the operation, Schniewind intended to use his two battlegroups to conduct a pincer attack on the convoy, and ideally using Ciliax and his armoured cruisers to draw the Allied Covering Force within range of the guns of *Tirpitz*. A limiting factor was the relatively short operational radius of his attached destroyers, and the risk of encountering Allied submarines in the area. Essentially, though, this would be a swift and devastating naval attack, where damaging ships was more important than sinking them. The crippled warships and merchantmen could then be left to wolfpack Eisteufel.

The role of Luftflotte 5 was critical. The Germans could not rely on their U-boats alone to detect the convoy. That was also the task of long-range patrol aircraft, sweeping as far west as Jan Mayen Island. On 14 June, Luftflotte 5 issued its own operational orders. Once the eastbound convoy was located, it would be shadowed, enabling a devastating series of air attacks to be launched against it. At first, this would be conducted by long-range He 115 floatplanes, but once it entered the Barents Sea, the convoy came within range of He 111s and Ju 88s. That was when the real assault would begin. Subordinate commanders were ordered to use all of their available resources to attack the convoy. Once the convoy was shadowed and its position and

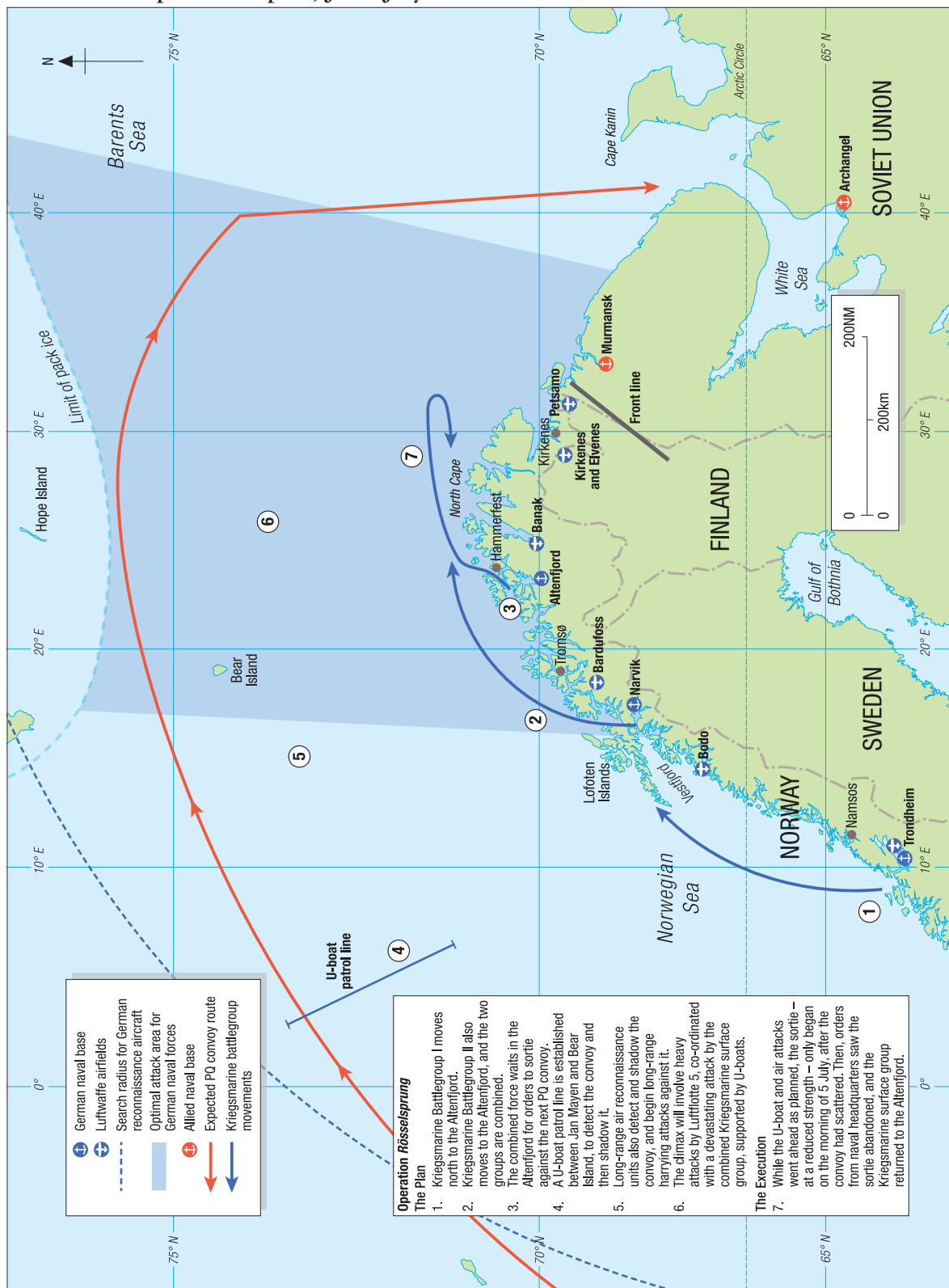
progress tracked, a series of attacks would be conducted over the course of at least two days, as PQ-17 headed eastwards through the Barents Sea. This would be conducted under the guidance of Ff Nord (Ost), based at Kirkenes.

However, the Luftwaffe realized that airpower alone was not sufficient to guarantee the destruction of PQ-17. After all, it had sunk only seven ships from the previous eastbound convoy, PQ-16. Co-operation between the air and naval commands in northern Norway was essential. This worked, in a fashion, but poor co-ordination led to missed opportunities. Similarly, the requirement to seek Hitler's approval for Operation *Rösselsprung*, the German Führer's concern about the British aircraft carrier and his risk-averse attitude to the deployment of *Tirpitz* all but wrecked the carefully laid plans of Carls and Schniewind. With hindsight, Raeder should have been more forceful in dealing with Hitler. However, the mere threat posed by the German naval sortie achieved results that were as spectacular as any naval attack Schniewind could have achieved.

Vizeadmiral Otto Ciliax was the Kriegsmarine's *Befehlshaber der Schlachtschiffe* (Commander of Battleships), and had led the 'Channel Dash' that February, flying his flag on the battleship *Scharnhorst*. Although he had no direct involvement in Operation *Rösselsprung*, he was a staunch advocate of the plan, lobbying Raeder, Carls and even Hitler to allow it to go ahead.



The German operational plan, June–July 1942



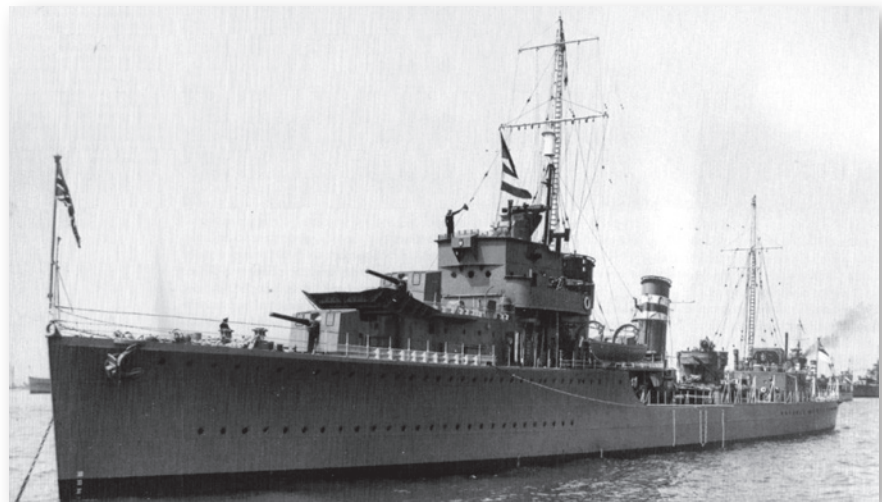
THE CAMPAIGN

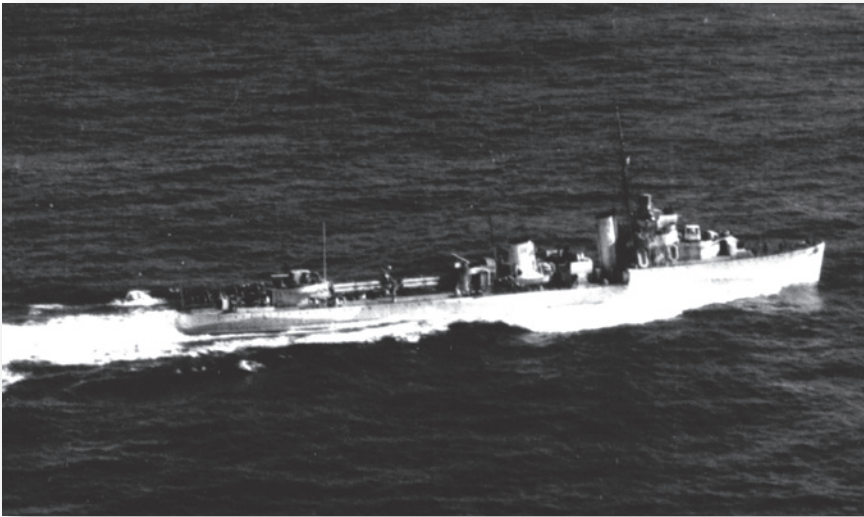
THE DEPARTURE

Seven miles north of the Icelandic capital of Reykjavik lies the Hvalfjörður, a broad, deep fjord cut into the Icelandic hills. Its narrow entrance made the fjord as readily defensible as it was sheltered and commodious. This became the main assembly point for the Arctic convoys. It was here, on the afternoon of Saturday 27 June 1942, that 36 merchant ships prepared for sea. Most of them flew the American flag, and numerous others the red ensign of Britain's merchant marine. A few bore the flags of other nations: Panama, the Netherlands or the Soviet Union. At the foremast of SS *River Afton*, flagship of the convoy commodore, the 'Blue Peter' was flying, signalling the imminent departure of Convoy PQ-17. At 1600hrs, the commodore, Capt. Dowding, signalled the convoy to proceed to sea. The merchant ships then filed out of the fjord, led by *River Afton*. Crammed into their holds were almost 300 fighter aircraft, 600 tanks, over 4,200 trucks and some 156,000 tons of military cargo – everything from ammunition and spare parts to soap and toiletries. Once safely out into the wide-mouthed Faxaflói Bay, the merchant ships formed up into their convoy formation.

This was a large rectangle of nine columns of merchant ships, each column 1,000yds apart. In turn, each column was made up of four rows, where each

F-class destroyer HMS *Faulknor* commanded by Capt. Alan Scott-Moncrieff was the leading ship of the 8th Flotilla, attached to the Home Fleet. *Faulknor* was typical of Britain's pre-war destroyers, with a good surface armament of guns and torpedoes, but a relatively weak anti-aircraft (AA) capability.





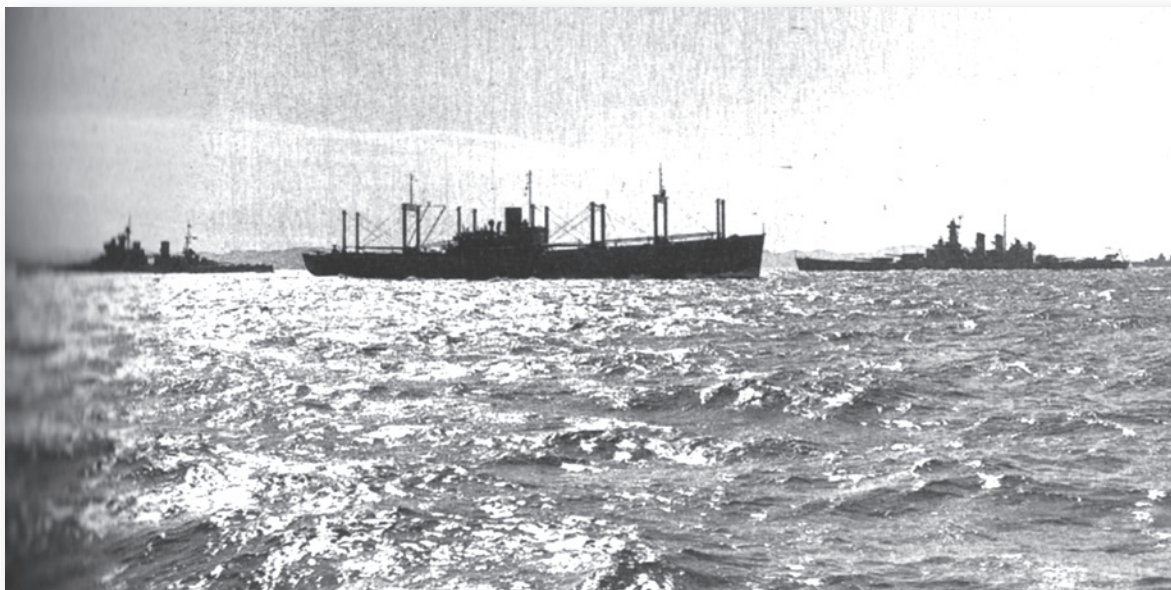
The destroyer HMS *Keppel*, commanded by Acting Capt. Broome. *Keppel* was a flotilla leader, built by Thornycroft at the end of World War I, and commissioned in 1925. The destroyer spent most of the war on escort duties, in the Arctic and the North Atlantic.

ship was 600yds from the one in front. Each ship had its assigned place. For instance, *River Afton* was in position '51', meaning the leading ship of the 5th or central column. The largest ship in the convoy, the 8,402-ton RFA *Aldersdale*, was in position '74' – the last ship in the seventh column. In all, the convoy formed a broad front of ships roughly 4nm across and 1nm deep. This was the formation that the merchant ships were expected to maintain until they reached Archangel, after a voyage of just over 2,000nm.

That Saturday, their escort consisted of three minesweepers (*Britomart*, *Halcyon* and *Salamander*) and four anti-submarine trawlers (*Ayrshire*, *Lord Austin*, *Lord Middleton* and *Northern Gem*). Later, the AA ships *Palomares* and *Pozarica* and a submarine, *P-615*, would join them. The rest of the Close Escort would meet the convoy as it rounded the top of Iceland. There, on 30 June, they would be joined by *Keppel*, commanded by Acting Capt. Jack Broome, in charge of the convoy's Close Escort force.

This operation involved two convoys, one heading towards Russia and the other away from it. The westward-bound Convoy QP-13 left Archangel the previous day, Friday 26 June, accompanied by a local escort. More ships joined them from Murmansk, bringing the total up to 35 merchantmen. The local escort then handed over to Commander Percy Todd and his Ocean Escort: five destroyers, an AA ship, four corvettes, two minesweepers, two ASW trawlers and the attached submarine, *Trident*. The convoy encountered thick, foggy weather, which cloaked them from the Germans. By 30 June, it was well past the most dangerous part of the Barents Sea, having kept to the north of PQ-17's route.

Meanwhile, PQ-17 entered the Denmark Strait, between Greenland and Iceland. Once past Iceland's westernmost tip, the convoy would cross the Arctic Circle, when it would turn slightly to head towards Jan Mayen Island, 480nm to the north-east. Beyond the island, the first real waypoint on the voyage, it would come within range of German reconnaissance aircraft, and would be sailing into the hunting ground of U-boats. For the moment, as Allied patrol aircraft and fighters flew overhead, the convoy was reasonably secure. Still, problems were encountered. On 27 June, the American-flagged Liberty ship SS *Richard Bland* ran aground off Faxaflói Bay. It was refloated, but had to be



Admiral Tovey's battleships of the Distant Covering Force, his flagship HMS *Duke of York* (left) and USS *Washington* (right), pictured off the northern coast of Iceland, with an American-built Liberty ship in the foreground, possibly from Convoy QP-13. In different circumstances, these could have found themselves in action with the battleship *Tirpitz*.

towed back to the Hvalfjörður. Two days later, numbers were reduced again. On the evening of 29 June, the American-flagged SS *Exford* ran into drifting ice off Hornstrandir, on the north-western tip of Iceland. Again, the damaged ship had to return to a shipyard in Reykjavik. The convoy was now reduced to 34 merchant ships.

However, a reconnaissance flight from Murmansk revealed that the ice pack had retreated farther than usual that year, and ran east from Spitzbergen. This allowed Dowding to put more distance between the convoy and the German airfields. The escort was then reinforced from Akureyri by Capt. Broome, accompanied by the destroyers *Fury*, *Leamington* and *Offa*, the escort destroyers *Ledbury* and *Wilton* and the corvettes *Dianella*, *Lotus*, *Poppy* and *La Malouine*. Following them was another RFA tanker, *Grey Ranger*, destined to serve as a floating fuel depot for British warships visiting Archangel. However, the tanker was damaged by ice on the evening of 30 June, and returned to Iceland.

Meanwhile, other Allied forces were now at sea to protect the two convoys. Rear Admiral Louis Hamilton's force contained his flagship, the British heavy cruisers *London* and its near-sister *Norfolk*, the American heavy cruisers *Tuscaloosa* and *Wichita*, and a screen of three destroyers, the British *Somali* and the American *Rowan* and *Wainwright*. His force emerged from the Seyðisfjörður in north-eastern Iceland at 0200hrs on 1 July, and steamed north, to reach a position where it could cover both Convoy PQ-17 and QP-13 by noon the following day. Rear Admiral Robert C. Giffen commanded the American cruisers. He had served alongside the Royal Navy before, while stationed in Scapa Flow during World War I. Some of his men were less-willing allies. The actor Douglas Fairbanks, Jr., a lieutenant aboard *Wichita*, was disparaging of the British fleet, claiming that 'its legendary superiority is gone'. What he witnessed during the next week did little to alter his impression.

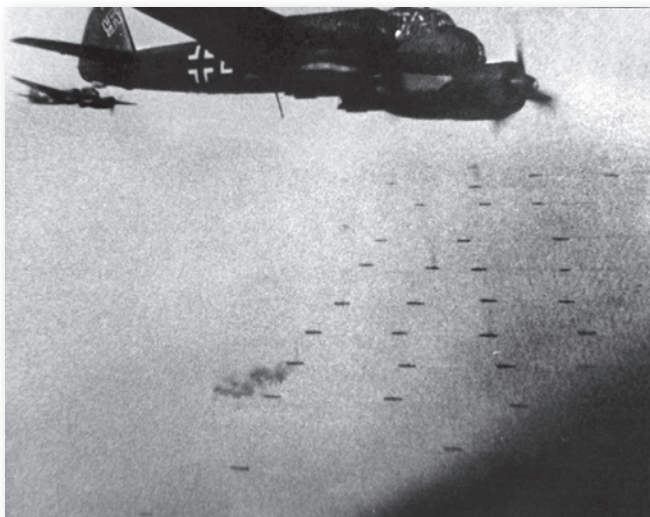
The weather was cold but clear, with patches of mist and lumpy seas to contend with. The morning of Wednesday 1 July brought better weather, and as the convoy passed Jan Mayen Island, it steamed through calmer seas and even sunshine. Broome took advantage of this to refuel his destroyers



Although the Hvalfjörður was primarily an assembly point for Arctic convoys, the anchorage near Reykjavik was also used by Allied warships. Here, warships from Admiral Tovey's Distant Covering Force can be seen, including the battleship USS *Washington*, during a visit to the convoy departure point.

from *Aldersdale*. Later that morning, two U-boats were sighted shadowing the convoy. They were driven off by Broome's escorts, but it meant that the Germans knew the convoy was on its way. Still, *U-255* and *U-408* continued to shadow the convoy, as did *U-456*. Their purpose there was clear – locate and follow the eastbound convoy. The boats were part of the newly formed wolfpack *Eisteufel*. The bulk of it, though, was farther to the north-east, forming the patrol line that spanned the convoy's most likely course. The Kriegsmarine already knew both convoys were at sea. At 1550hrs on 1 July, the westbound convoy had been sighted by a U-boat 180nm from North Cape, and it was being shadowed. Spies in Iceland had also told the Germans that PQ-17 had sailed. The three U-boats were not there by chance.

Then, at 1400hrs on 30 June, a Blohm & Voss Bv 138c flying boat was spotted. This large twin-tailed seaplane might have been ungainly, but it could range west as far as Jan Mayen. This one, from KüFlGr-406, was operating from Bardufoss to the south of Tromsø. About 30 minutes later, the seaplane turned for home, which was just as well, as shortly before 1500hrs, the escorts on the starboard beam of the convoy sighted ships to the east. This turned out to be Admiral Tovey's Distant Covering Force, which had left Scapa Flow at 1700hrs on 29 June. Tovey's force included the battleships *Duke of York* and *Washington*, aircraft carrier *Victorious*, heavy cruiser HMS *Cumberland*, light cruiser *Nigeria* and 12 destroyers and escort destroyers. It would be the only contact between PQ-17 and Admiral Tovey's force during the whole operation. The warships continued to the north, towards Tovey's holding position to the north-east of Jan Mayen. His task was to provide support for the two convoys in case *Tirpitz* put to sea. However, Tovey was under orders not to venture farther east, unless there was a real chance of engaging *Tirpitz*. There was no leeway in those orders that allowed Tovey to risk exposing his capital ships to attack by German land-based bombers unless this risk was worthwhile.



Shortly after 1500hrs on 1 July, the convoy endured its first attack. Four torpedoes were spotted, but the long-range salvo missed its mark. They came from Kptlt. Teichert's *U-456*, which was hunted and attacked by *Fury*, quickly supported by *Ayrshire*, *Lotus* and *Wilton*. Teichert, however, managed to slip away. Broome was showing he had learned the lessons taught by Captain Walker, whose aggressive tactics in defence of Convoy HG-76 the previous December had transformed escort strategy, encouraging the active hunting of U-boats by escort commanders. By early 1942, these had been adopted by the Royal Navy.

A pair of Ju 88 bombers of KG-30 pictured circling a large Arctic convoy, looking for the best avenue from which to carry out an attack. This gives a good impression of the formation adopted by PQ-17, with each ship keeping exact station within the formation.

THE FIRST AIR ATTACKS

Shads continued to shadow the convoy as the skies remained clear and the seas calm. The convoy's only cover came from the occasional patches of icy mist it passed through. Small icebergs could be seen off its port beam, having broken off from the Greenland pack ice. By 1800hrs on 2 July, it was 400nm from Norway, and halfway between Jan Mayen and Bear Island. That meant the only real risk of air attack was from three-engined Heinkel He 115 floatplanes. The other threat was from U-boats, as it was



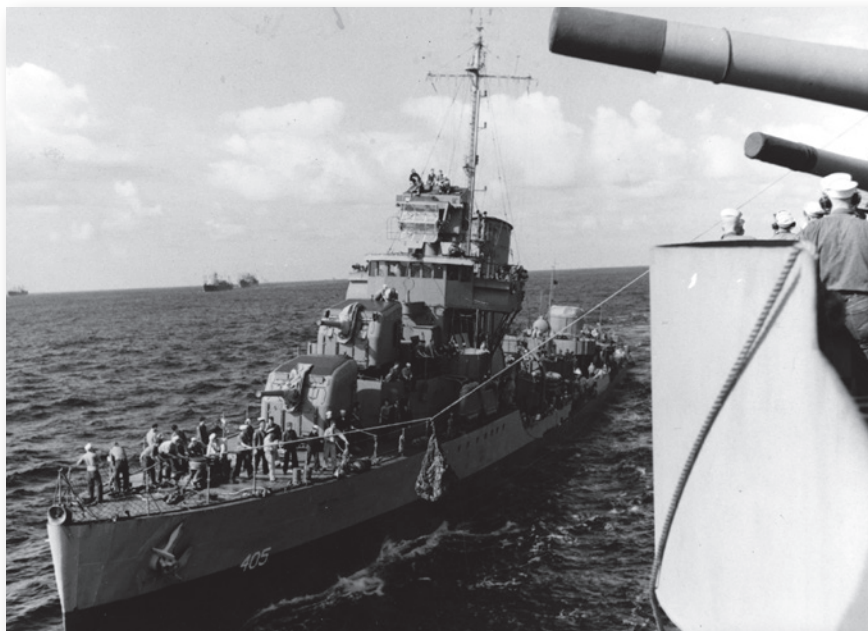
The crew of a British four-barrelled 2-pdr (40mm) 'pom-pom', one of the principal close-range AA weapons available to the convoy escorts. It was fairly accurate, and threw up an impressive weight of fire, but it offered little protection against longer-range attacks by torpedo bombers.

passing through the area in which Admiralty intelligence warned they had established a patrol line. So far, the U-boats had been kept at bay. Broome hoped that would continue.

When the attack arrived, minutes later, it came from the air. Half an hour before, the American destroyer *Rowan* had been sighted, approaching from the south-west. It had been detached from Hamilton's cruiser force, a dozen miles to the west, to refuel from *Aldersdale*. At that moment, nine He 115s were spotted to the east, all from I/KüFlGr-406, based at Bardufoss. They did not attack right away, but circled the convoy looking for a weak spot. Then they attacked from astern, in three groups, seemingly targeting *Aldersdale* and Soviet tanker *Azerbaijan*. This Soviet vessel was primarily crewed by women, a rarity in the waters of war. The closest escorts were the destroyer *Fury*, rescue ship *Zaafaran* and *Rowan*. One of the leading group of floatplanes was shot down, a shell erupting below its fuselage. The floatplane curved away and crashed off the convoy's starboard side. The three-man crew survived, though, and were rescued by *Wilton*. The other two floatplanes dropped their aerial torpedoes, then turned away. The convoy dodged them by turning together to port.

A second group of Heinkels then approached from the convoy's port beam, but were driven off by heavy fire from the AA ship *Pozarica*. Like the others, they released their torpedoes at long range, around 4,000yds, and withdrew. The remaining Heinkels did the same from starboard, but again no hits were scored. It was now 1910hrs. At that point, a large mist bank enveloped the convoy, screening it from their shadows. Taking advantage of this, Dowding, having turned the convoy north during the attack, resumed his old easterly course, heading directly towards Bear Island. The hope was it would bypass any waiting U-boats.

The rest of the evening proved uneventful, and the mist continued to cloak the convoy until the forenoon of Friday 3 July, but it disappeared as



The US Navy's Benham-class destroyer USS *Rowan* was about to refuel from the RFA *Aldersdale* when the Germans launched their first air attack on PQ-17. The destroyer quickly added the weight of its fire to that of the British escorts to drive off the attackers.

A British escort depth-charging a suspected U-boat in 1942. By this stage of the war, anti-submarine tactics had evolved through wartime experience, and escort commanders showed greater aggression in the detecting and hunting of submerged U-boats.



the convoy sailed through it. Approximately 40nm to the north, the Cruiser Covering Force maintained a parallel course, and was untroubled by U-boats. Several U-boats were detected by the convoy, but through aggressive tactics, Broome's escorts kept them at bay. Afterwards, Broome said he thought the U-boat crews were not of the best quality, coming, as he put it, from the 'second eleven' (i.e., a second-rate team).

The Walrus floatplane from Hamilton's flagship had discovered that the pack ice had receded farther than the Admiralty had thought, giving the convoy more leeway. Dowding, though, decided to hold his course, as any deviation would lengthen their transit of the Barents Sea. However, at 2000hrs, he turned to the north-east, to pass to the north of Bear Island during the night. At 2215hrs, when Hamilton's cruiser force was just 12nm north of the convoy, it was detected by a Shad. Half an hour later, both Allied groups entered another large bank of mist, and so were hidden from their shadowers. So, Dowding made a two-hour turn towards the north during the night, to throw off the Shads. Before the dawn on Saturday 4 July, the mist began to rise until it hung above the convoy, a sight that was likened to a blanket hanging 100ft above it. At sea level, the convoy could be seen for miles.

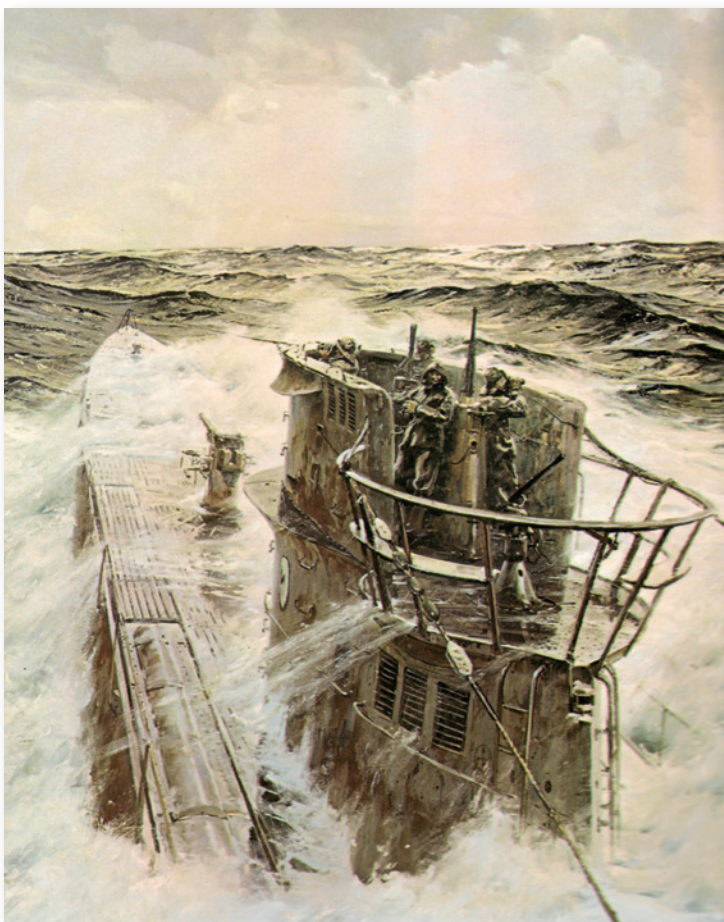
It was now some 60nm north of Bear Island, and so well within air range of German bombers. At around 0400hrs, a gap appeared in the overhead mist. A few minutes later, an He 115 patrolling over the convoy dived through the gap to get a good look. Without warning it then dropped its torpedo 1,000yds off the convoy's starboard beam, then climbed back into the layer of mist. *Palomares* fired at it without effect. Capt. Jauncey turned *Palomares* hard to port to avoid the torpedo and managed to dodge it. The torpedo skirted the convoy's outboard column, before striking the starboard side of the American ship SS *Christopher Newport*. The US-flagged Liberty ship was unusual in that around 85 per cent of its crew was African American. It was now 0452hrs in the morning of what, for the crew, would be an Independence Day to remember.

The torpedo struck the merchantman just abaft the funnel, and the detonation blew a hole in the side of the engine room. Three crewmen were killed in the blast, which also wrecked the engines and damaged the steering gear. The rescue ship *Zamalek* arrived within minutes, as the other merchant ships in the column filed past the stricken ship. Within minutes, the 47 survivors were safely transferred to the rescue ship. The abandoned *Christopher Newport* was then left behind, as the convoy continued on its way.

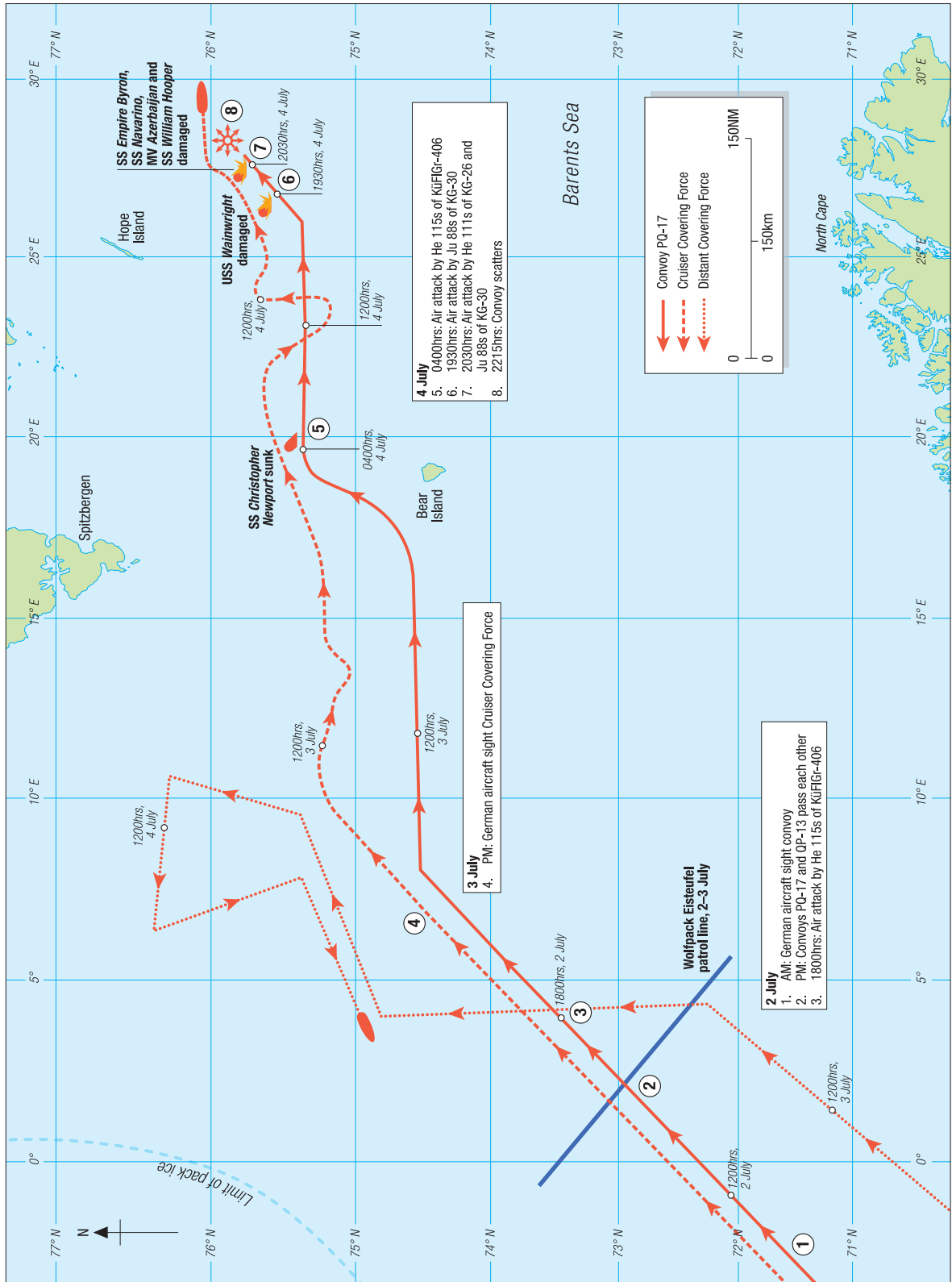
Its Baltimore shipyard clearly did a good job, as the *Christopher Newport* remained afloat. The submarine *P-614* hit the ship with a torpedo, and the corvette *Dianella* tried depth charges, but the merchantman remained stubbornly afloat. So, the hulk was left behind. The convoy continued, steaming through calm seas and clear skies. As a result, the Shads returned.

During the forenoon, the American ships did what they could to celebrate Independence Day, raising fresh flags and preparing celebratory dinners. Farther north, a signal from Capt. Hill of *Wichita* to Hamilton's flagship read: 'Celebration of this holiday always required large firework displays. I hope you will not disappoint us.' Hill's wish would be granted. Meanwhile, Hamilton had more pressing concerns. His orders stated he should escort the convoy only as far as 25° east, a line of longitude 90nm beyond Bear Island. He signalled the Admiralty, requesting permission to continue farther to the east, and at noon, he was allowed to continue, until ordered to withdraw. So, Hamilton remained on his easterly course.

A German U-boat on patrol in northern waters. While foul weather was the norm in the Barents Sea, Convoy PQ-17 enjoyed relatively calm weather, which made it easier for shadowing U-boats to keep station with it, and send in regular sighting reports.



The first losses to Convoy PQ-17, 2–4 July 1942



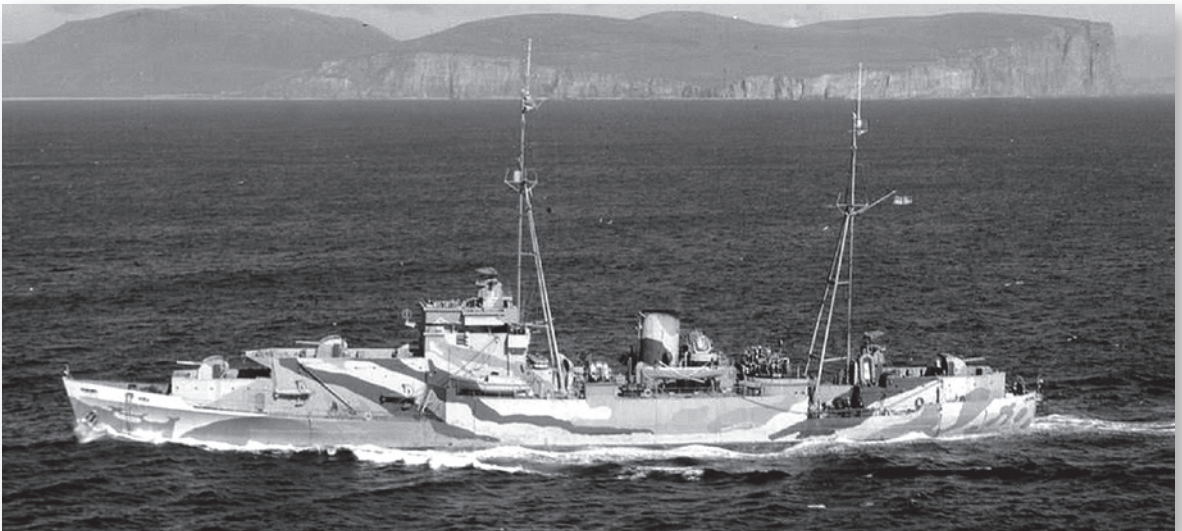
Hamilton had already been warned of a possible sortie by the Kriegsmarine. At 1230hrs, Hamilton's superior Tovey altered the instructions. Hamilton was not to continue unless it was safe to do so, and had confirmation that the *Tirpitz* had not sortied. As no word of any sortie had reached Hamilton, he compromised, and told both Tovey and the Admiralty that he would continue to cover the convoy until 2200hrs, when he would reverse course. By mid-afternoon, Hamilton took station 20nm to the north-east of the convoy, on a parallel course. Occasional mist patches drifted past, and it became overcast, but visibility was good, and Hamilton's cruisers were sometimes visible, picked out against the icebergs. At 1645hrs, when they were 45nm south of Hope Island, the convoy made another course change. Since early morning, they had been steering east, but they now turned north-east, moving closer to the pack ice. At that moment, Kptlt. Heino Bohmann's *U-88* launched four torpedoes at the convoy, but these were foiled by the convoy's turn.

Then, at 1900hrs, an Admiralty signal warned that an air attack was expected within the hour. Sure enough, at 1910hrs, Broome saw several large bombers approach and begin circling the convoy. Still, with the 'ack-ack' ship *Pozarica* stationed off the convoy's port beam and its sister *Palomares* off the starboard one, and each accompanied by a destroyer equipped with air search radar, Broome was as ready for an attack as he could be.

Occasionally, groups of bombers approached the convoy, only to be driven off by the two AA warships and their consorts. They were probing the convoy's defences. Earlier, one observer from the *Pozarica* also saw eight He 115 floatplanes land on the water, 6nm astern of the convoy, clustered together as if they were holding a discussion. These then took off again and formed up into a group. The airmen finally made their move at 1920hrs, when US destroyer *Wainwright* from Hamilton's force approached the convoy, to refuel from *Aldersdale*. The Germans felt this would disrupt the convoy's defensive ring, and so tried to exploit this.

As *Wainwright* approached *Aldersdale*, a single Ju 88 attacked it from astern, pressing through heavy fire to drop its bombs over the destroyer.

HMS *Palomares*, pictured here off the coast of Orkney, and its sister HMS *Pozarica* were AA ships, converted from pre-war banana boats. Their combination of air warning radar, powerful long-range AA armament and effective fire control made them potent air defence vessels.





USS *Wainwright*, a Sims-class destroyer commanded by Lt. Cdr. Robert H. Gibbs USN, was another US Navy destroyer attached to Hamilton's cruiser force, which played its part in fighting the air attacks on PQ-17. The firepower of the American destroyer impressed the British onlookers.

However, they landed harmlessly off the port bow. Refuelling was abandoned as Lt. Cdr. Gibbs swung his destroyer clear to add its weight to the barrage. The Ju 88 banked away, but 11 torpedo-armed He 115s continued to circle. At 1930hrs, they split into two groups and launched their torpedoes from the port and stern quarters of the convoy. These were dropped 2nm away, though, and were avoided easily.

Then, at 2020hrs, *Palomares'* air search radar detected 25 aircraft approaching from the south. These were large twin-engined Heinkel He 111 bombers. Eight from III/KG-26 were bomb-armed, while the remainder from II and III/KG-26 carried torpedoes. These circled the convoy before approaching it from astern. The torpedo bombers split into groups of three to four aircraft, each flying towards the gaps between the convoy's columns. Meanwhile, as a distraction, the bomb-armed Heinkels approached the convoy from either side. A fierce barrage was thrown up, creating a wall of air bursts, while the smaller weapons also opened up. *Wainwright* joined in with its semi-automatic guns, surprising the British with the intensity of the fire, and quickly hit the lead bomber.

On *Aldersdale*, Chief Engineer William Brown saw what happened: 'I could see right into the Perspex-covered cockpit. With tracer bullets ripping the plane from all angles the cockpit was a mass of flames.' He watched the pilot drop his torpedo before slumping forward. The Heinkel then crashed into the sea ahead of *Aldersdale*. This proved too much for some of the

other aircrews and several released their torpedoes at long range while still well astern of the convoy. These all missed. Other pilots, though, held their nerve, and flew on through the 'ack-ack' barrage. Still, the downed Heinkel had managed to drop its two torpedoes just seconds before being hit. One of them struck SS *Navarino*, a Scottish freighter of 4,800 tons, which was the second ship of the fourth column.

Navarino staggered and started belching smoke, before slowing to a stop. Fifteen of its crew were killed in the explosion. *Navarino* was then hit by the second torpedo. Astern of it, American merchantman *Bellingham* veered around the crippled ship, keeping clear, and as it did, a British seaman at *Navarino*'s rail raised his fist in a Communist salute, and yelled over, 'On to Moscow! See you in Russia!' This bravado might have been commendable, but there was no hope for the *Navarino*. The engine room quickly flooded, and with the fire out of control, the order was given to abandon ship.

Some of the pilots were exceptionally daring. One of these, Lt. Hennemann, dropped his bombs over the submarine *P-614*, which was running on the surface, but they missed the boat. Other bombers followed Hennemann's lead to carry out low-level bombing attacks, as the torpedo planes carried out their attack. As a result, some defenders claimed to have looked down on some of the bombers as they flew past them. Four torpedo bombers flew between the two left-hand columns of the convoy, before banking round and dropping their torpedoes. However, this and other similar snap attacks didn't

The ungainly Blohm & Voss Bv 138 *Seedrache* ('Sea Dragon') was a three-engined flying boat that was used by the Luftwaffe as a long-range maritime patrol aircraft. Nicknamed the 'Shad' by the Allies, this large, six-crew plane had the ability to range far out over the Greenland Sea, and then shadow a convoy until it could be attacked by conventional bombers and torpedo planes.









FIRST AIR ATTACK ON THE CONVOY, WEDNESDAY 2 JULY 1942 (PP. 46–47)

The first air attack against the convoy came early on Wednesday evening, when it was still 250 miles west of Bear Island. This was beyond the range of normal Luftwaffe bombers, but the convoy was 350 miles from Tromsø, and so just within reach of the Luftwaffe's Heinkel floatplanes of I/Küstenfliegergruppe-406 based near there. They were guided towards the convoy by the shadowing BV 138s, and at 1730hrs, nine He 115 torpedo planes appeared from the south-east. Each of these large floatplanes carried a single 45cm (18in.) aerial torpedo, but they were slow and vulnerable, and so their crews circled the convoy for a while, gauging the right time and place to launch their attack.

Then, just after 1800hrs, the first wave of four aircraft made their move, dropping down to sea level, with two attacking from port and two from starboard. The escorts at the rear of the convoy unleashed a heavy barrage, and the two to port launched their torpedoes at maximum range, and turned away. The ones approaching the convoy's starboard quarter were more determined, and one headed for the Soviet tanker *Azerbaijan*, at

the rear of the 6th column. This brought it within range of the destroyer *HMS Fury*, and rescue ship *Zaafaran*. Also joining in was destroyer *USS Rowan*, which had just rendezvoused with the convoy to refuel from *RFA Aldersdale*. The floatplane was hit, and jettisoning its torpedo, it ditched into the sea, off the southern side of the convoy. The crew were rescued a few minutes later. That proved too much for the remaining floatplanes, which all released their torpedoes at extreme range, and headed back towards the Norwegian coast. The attack was a complete failure.

This shows the scene moments after the He 115 (1) was hit. At the time, the torpedo bomber was lining up on the tanker *Azerbaijan* but a large shell exploded beneath the aircraft (2), setting its starboard engine ablaze and wrecking the rudder. Half a minute later, it crashed off the convoy's starboard quarter. The 'kill' was claimed by three escorts – *USS Rowan*, *HMS Fury* (3) and rescue ship *Zaafaran*. Also nearby was the escort destroyer *HMS Wilton*, which was ordered to pick up the bomber's three-man crew.

score any hits. There were numerous near misses, with *Aldersdale* almost hit by several torpedoes in the space of a few minutes.

Then, at 2048hrs, a more calculated attack by four Heinkels resulted in a hit on tanker *Azerbaijan*, at the rear of the sixth column. A torpedo exploded against the starboard hull, blowing a large hole in one of the fuel tanks, and starting a major fire. The tanker was soon engulfed in a cloud of thick black smoke, and onlookers feared the worst. Fortunately for the tanker's crew, the hold was filled with linseed rather than fuel oil, so there was no immediate risk of an explosion. The burning, holed tanker slewed off course, forcing neighbouring ships to veer out of its way. The stricken tanker then dropped astern, as the convoy held its course.

Meanwhile, the air attack continued. Four bombers were hit, and several others were damaged by the heavy fire. Still, one of the Heinkels, flown by Hauptmann Eike, dropped its two torpedoes from immediately astern of the convoy's second column, and one of these struck the starboard side of the Liberty ship *William Hooper*, the fourth ship in the first column. Eike's bomber was hit and badly damaged but managed to limp away. The detonation ripped a hole in the side of the merchantman's engine room, killing three men. As the ship began listing and panic took hold, the ship's master (captain), Edward Graves, allowed his crew to take to the boats. Meanwhile, fire raged through the crippled and abandoned ship.

That was the last phase of the attack, and at 2050hrs, the bombers flew off and guns fell silent. It proved to be the last attack of the evening. The convoy had held its formation, but there were now gaps in its ranks. On *Azerbaijan*, some of the crew panicked and abandoned ship. Others stayed to fight the blaze. Eventually, the firefighting teams overcame the fire, and the

The Heinkel He 115 was a three-seater seaplane used by the Luftwaffe as a reconnaissance aircraft, a torpedo bomber and even as a minelayer. This floatplane was slow and poorly armed, but its vulnerability meant less over the Barents Sea, where the Germans enjoyed almost complete air superiority. These aircraft could carry a single aerial torpedo, or a payload of bombs.



tanker managed to get under way again. As Broome put it later, the ship was, 'holed but happy, and capable of making nine knots'. Still, both *Navarino* and *William Hooper* were beyond hope. Attempts were made to scuttle both ships by gunfire, but this proved ineffective. So, they were abandoned, as the convoy pressed on, its speed now reduced to allow *Azerbaijan* to keep pace.

Meanwhile, aboard *London*, Hamilton knew his cruisers would soon have to withdraw to the west, but he was still confident that PQ-17 would make it safe into port. After all, the convoy had defended itself well against both U-boat and air attacks. So, with *Wainwright* heading back after refuelling, Hamilton ordered *Somali* to break off and refuel from *Aldersdale*, too. Then, fully fuelled, his force would withdraw.

Shortly after the attack finished, both Hamilton and Broome reported their position to Tovey, and the Admiralty and Broome listed the convoy's recent losses. Both he and Dowding were pleased with the convoy's performance. Two air attacks had been driven off, morale remained high, and while the convoy had suffered losses, the escorts had proved that their air defences were formidable. That evening, Broome wrote, 'My impression on seeing the resolution displayed by the convoy and its escort was that, providing the ammunition lasted, PQ-17 could get anywhere.'

Then, in an instant, everything changed. It began with an order at 2111hrs to Hamilton from the Admiralty, ordering him to withdraw his cruisers immediately at high speed. Twelve minutes later, this was followed by another far more devastating signal from the Admiralty. It read:

IMMEDIATE. OWING TO THE THREAT OF SURFACE SHIPS, CONVOY IS TO DISPERSE, AND PROCEED TO RUSSIAN PORTS.

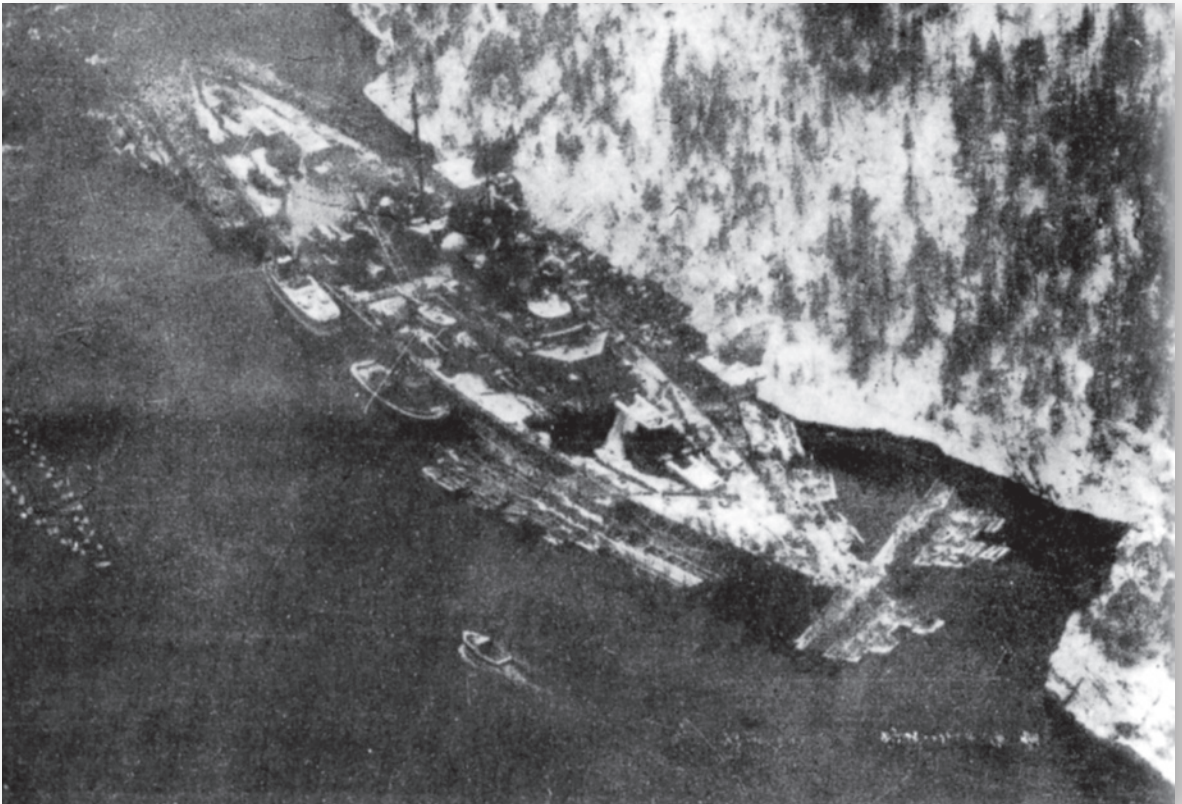
Someone at the Admiralty then felt this had not used the correct phrasing, as the term 'disperse' was not unequivocal. So, 13 minutes later, at 2136hrs, a second signal arrived. It said simply:

SECRET. MOST IMMEDIATE. MY 2123/4. CONVOY IS TO SCATTER.

THE DECISION TO SCATTER

For his part, Admiral Schniewind couldn't launch his planned attack on PQ-17 without the approval of his superiors, including Hitler. Still, by 1700hrs on 2 July, Generaladmiral Carls approved the start of the preliminary phase of Operation *Rösselsprung*. This involved the grouping of both battlegroups in the Altenfjord near North Cape. However, Schniewind had to wait until Hitler formally approved *Rösselsprung*. Only when this permission came could the sortie begin in earnest. Consequently, at 2000hrs on 2 July, *Tirpitz* left the Faettenfjord, and headed towards the open sea, accompanied by the rest of its battlegroup.

Once clear of the Trondheimfjord, the force would sail to the Gimsøystraumen Strait near Narvik, at the end of the Vestfjord. The following morning at 0230hrs on 3 July, Kummetz led his battlegroup to sea from Narvik, passing down the Ofotfjord before threading through the coastal channels between the Ostford and the Altenfjord. That was where things went wrong. First, *Lützow* ran aground in the narrow



Tjeldsund, a channel leading north from the Ofotfjord. Then, when Schniewind reached Gimsøystraumen, the destroyers *Karl Galster*, *Hans Lody* and *Theodor Riedel* ran aground in the narrow channel. So, as both the armoured cruiser and the three destroyers needed repairs, they could no longer take part in *Rösselsprung*. Still, with Kummetz on his way to the Altenfjord and Schniewind following a few hours behind him, the Kriegsmarine's surface forces continued to move into position for their sortie.

Normally, the RAF would fly regular reconnaissance flights over both the Faettenfjord and Narvik. However, bad weather prevented these flights from taking place on 2 July. It was the afternoon of Friday 3 July, when the next flight took place. This revealed that *Tirpitz* and *Admiral Hipper* had left the anchorage. When this news was sent to the Admiralty, the conclusion was simple. The battleship and its consort had put to sea, with the probable intention of attacking PQ-17. Another flight over Narvik later that day also revealed that the two armoured cruisers had sailed – the grounded *Lützow* had not been spotted. The likelihood then, was that both German forces would make for the Altenfjord, their most northerly base, before beginning their sortie. Admiral Tovey was told of *Tirpitz*'s departure a little after 1900hrs on Friday evening.

Later that evening, this was also passed on to Broome and Dowding, though there was no immediate cause for concern. No action was taken, and the convoy continued on its way. On 4 July, as the convoy began its transit of the Barents Sea, the Admiralty provided an intelligence evaluation. It deduced that if the German surface group did sortie against PQ-17, then

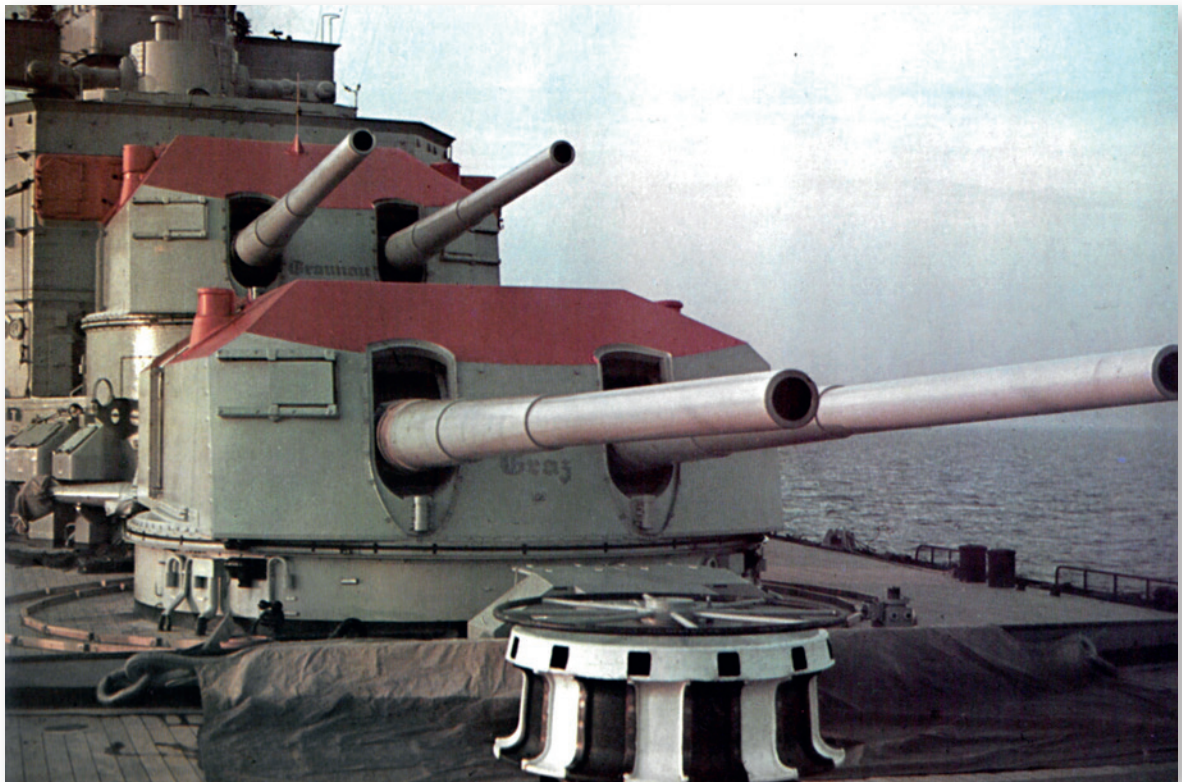
KMS *Tirpitz* pictured in its usual lair in the Faettenfjord, an offshoot of the Trondheimfjord. This snug mooring, 30 miles from the open sea, was chosen because it was difficult to attack from the air. It was from here that *Tirpitz* began the sortie that posed such a threat to PQ-17.

the attack would take place that evening, somewhere between the longitudes of 15° and 30° east. By noon, both the convoy and the Distant Covering Force were well within this 250nm-wide band, moving eastwards. It was assessed that by midnight, the convoy would be out of this danger zone. For the moment, throughout most of 4 July, the convoy operation continued as planned.

In light of the slightly contradictory orders from the Admiralty and Tovey, Hamilton told his superiors that he intended to withdraw to the west at 2200hrs on Saturday evening. At that point, Tovey's Distant Covering Force was approximately 360nm due west of the convoy. This meant that if *Tirpitz* did sortie, Tovey would be unable to bring it to battle before the evening of Sunday 5 July. Then, at 1900hrs, the Admiralty signalled Hamilton, ordering him to remain with the convoy pending further instructions. This marked the start of a series of messages between the Admiralty and Hamilton, the senior naval officer 'on the spot', completely bypassing Tovey. That evening, this break with the usual channels, combined with the growing unease in the Admiralty, would culminate in the making of a decision that would have catastrophic repercussions.

On the evening of Saturday 4 July, while the convoy was under heavy air attack, the Admiralty was considering what appeared to be a perilous situation. The last chance of the Home Fleet offering direct support to the convoy had passed. At the Admiralty, operational control of the situation lay in the hands of the First Sea Lord, Admiral of the Fleet Sir Dudley Pound. His was an unenviable task, as any decisions had to be based on incomplete information, drawn from the latest intelligence reports, his

The 20cm (8in.) guns of German heavy cruiser KMS *Admiral Hipper*. This powerful cruiser had already conducted successful commerce-raiding sorties into the Atlantic, and was perfectly designed to hunt down merchant ships, if their escort could be driven off.





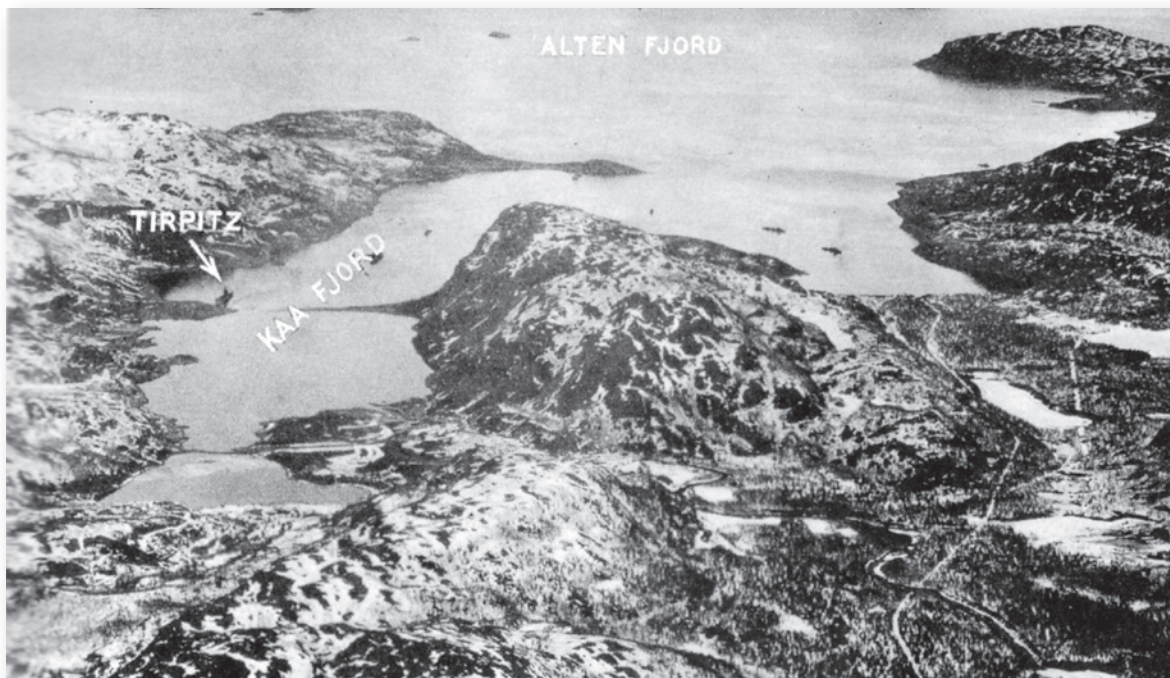
The armoured cruiser *Lützow*, flagship of Vice Admiral Kummetz, at the northern moorings in the Altenfjord, protected by anti-torpedo nettings. *Lützow* was easily distinguishable by its high funnel cap – a feature that set it aside from its sister ship *Admiral Scheer*.

knowledge of friendly and enemy dispositions in the Barents Sea, and his own considerable naval experience. On 4 July 1942, he made the wrong decision.

The real problem was the whereabouts of *Tirpitz*. On the afternoon of 4 July, at 1400hrs, it had been confirmed that it had not returned to the moorings in the Faettenfjord. The naval intelligence, based partly on Ultra codebreaking information, led to the assertion that despite a lack of positive evidence in the form of an aerial reconnaissance photograph, it was ‘tolerably certain’ that the armoured cruisers *Admiral Scheer* and *Lützow* had been in the Altenfjord since the afternoon of 3 July. The location of *Tirpitz* and *Admiral Hipper* were still unknown, but a lack of German signals ‘chatter’ and other passive evidence suggested they and the armoured cruisers were not at sea. Without firm evidence to support this assertion, though, Pound remained concerned. A month before, details of the planned German operation had reached Pound by way of Capt. Denholm, Britain’s naval attaché in Stockholm. Just over a year before, he had warned Pound that the *Bismarck* was at sea. That June, he warned him about a planned sortie by its sister ship.

At 1900hrs on 4 July, after a trip to Bletchley Park to review the latest intercepts, Pound convened a meeting to review the situation. His deputy, Vice-Admiral Sir Henry Moore, Vice-Chief of the Naval Staff, recalled that the discussion lasted more than an hour. For much of the time, as was his wont, Pound remained silent, with his eyes closed, listening to the others. At one point, Pound consulted Paymaster-Commander ‘Ned’ Denning of the Admiralty’s Naval Intelligence Division for his opinion. Denning reiterated the assertion from Bletchley Park that the lack of intercepts and general radio traffic suggested a major sortie was not under way. However, he was unable to confirm whether *Tirpitz* was at anchor or at sea. A fresh message from Bletchley Park reported that the ‘CinC of the Fleet in *Tirpitz* arrived to Alta 0900/4’. In other words, that morning Schniewind and his flagships had arrived in the Altenfjord. Another intercept revealed that the attached destroyers were ordered to refuel.

Dramatic though this was, this lack of evidence weighed on Pound. If *Tirpitz* and its consorts had sortied from the Altenfjord that afternoon, then a devastating attack on the convoy could be expected as early as midnight. There was nothing to suggest that was not about to happen. If Pound were in Schniewind’s position, then Pound felt that this would be exactly what



The mooring place for *Tirpitz* during Operation *Rösselsprung* and for the year that followed was the Kaafjord, a small southern arm of the Altenfjord. This view of it comes from a British aerial reconnaissance photograph, used in the planning of air attacks on the anchorage.

he would do. In those circumstances, even if Hamilton's cruisers remained to support the convoy, they would be unable to prevent a disaster. That afternoon, most of the staff at the meeting were in favour of the convoy remaining together, regardless of the risk posed by the German surface fleet. Moore, though, argued that with Hamilton and his cruisers due to withdraw to the west that evening, the convoy would be virtually defenceless if the German surface ships fell upon it. He also felt that it was unfair to give the senior naval officer on the spot, Capt. Broome, the task of fending off *Tirpitz* with his puny force of escorts.

Eventually, when the discussion had run its course, Pound made his decision. On a signal pad in front of him, he wrote his order, and then announced to the assembled officers that 'the convoy is to be dispersed'. Effectively, this meant that it would continue to Russian ports, but not in an organized formation. It permitted groups of ships to spread out, and even for groups to sail together in company. However, Moore then pointed out that this would take time, and probably would not be completed by the time the German surface force could arrive. So, Pound modified his order. He said that he meant for them to scatter, and this correction was sent to the Admiralty signals section for transmission.

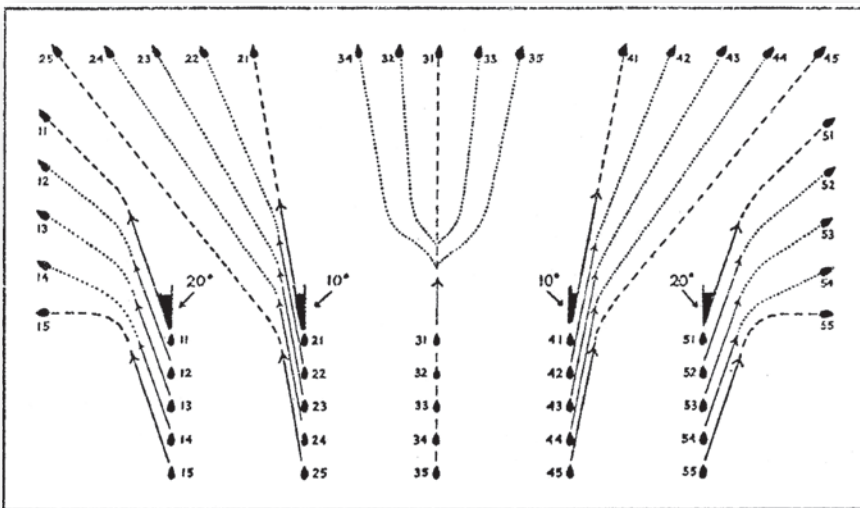
Scattering a convoy was an altogether more involved process than dispersing. To scatter, ships would peel off from the outer columns at 10–20° from its original course, then turn away in a different direction from each other. This would be repeated in sequence by the inner columns until the merchant ships were fanning out across the sea in a 180° arc, following different compass headings. This meant that some would be heading back the way they had come, while others were heading parallel to the Norwegian coast. This would continue until all ships were effectively over the horizon from each other. Then they could turn away, and head towards a Russian port. The only direction not covered in the 'scatter' order was the southern



half of the circle, facing the Norwegian coast. This was the direction the enemy surface ships were expected to attack from. The obvious risk of this was it would leave the merchant ships completely vulnerable to air and U-boat attacks. It was really a procedure that was to be carried out if there was a much greater and more imminent risk of attack from surface ships. This then was the obvious implication to the convoy – *Tirpitz* and its consorts were about to attack at any moment.

On board HMS *Keppel*, Broome was stunned when he was handed first one signal, then the other. Afterwards he wrote, 'I was angry at being forced to break up, disintegrate such a formation, and to tear up the protective

KMS *Admiral Hipper* pictured in Norwegian waters. In the plans for *Rösselsprung*, *Hipper* and several destroyers would search for PQ-17, and pin its escorts, while the pincers formed by *Tirpitz* and the two armoured cruisers would then close in.



In this extract from *The Merchant Navy Signals Book* (1942), the procedure for scattering a convoy is shown. Each ship would turn away from the base course, after changing course by 10–20°, and would then fan out further on slightly divergent bearings, proceeding at full speed. After that, the safety of each ship was left to its own master (captain).

fence we had wrapped around it.’ Still, it was his job to pass on the order to the convoy commodore. Clearly an imminent and overwhelming attack was expected, so in those circumstances, scattering the convoy was arguably the least disastrous course. As Broome put it, ‘We were all expecting to see ... enemy masts appearing over the horizon.’ So, he sought out *SS River Afton*, at the head of the convoy, and at around 2215hrs, he ordered his yeoman to hoist the signal to scatter – a white pennant with a red St. George Cross. When the convoy commodore acknowledged this signal, the whole manoeuvre began. At that moment, Convoy PQ-17 ceased to exist. All that remained were individual merchant ships, whose crews would now be left to their own devices.

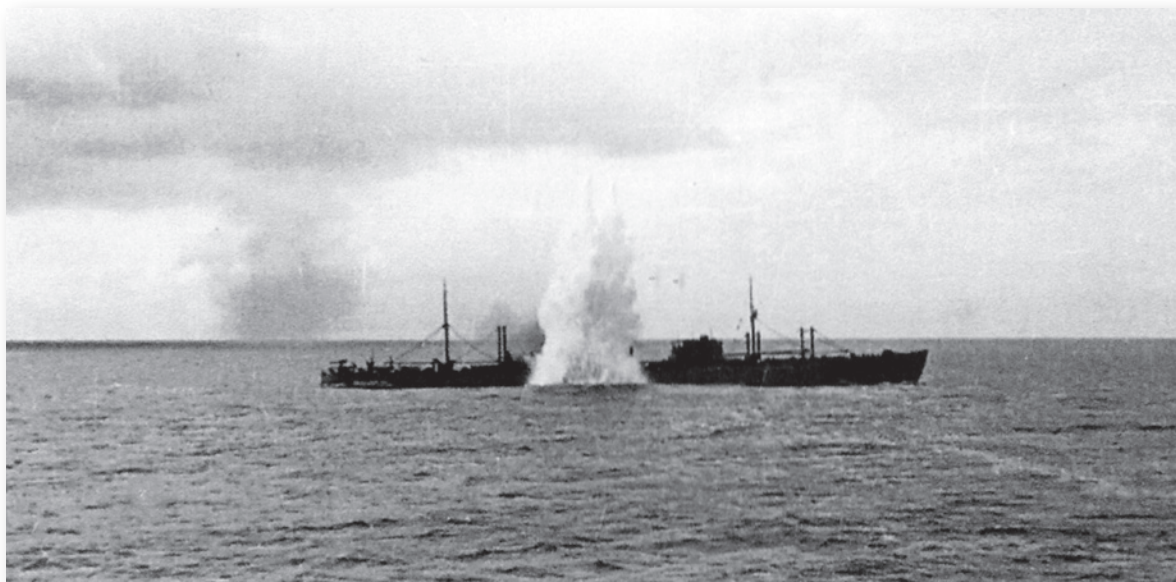
THE SLAUGHTER OF A CONVOY

To reinforce the order, Broome steamed through the convoy, radioing all ships, and repeating the order using the destroyer’s signal lamps. This continued until all the merchant ships’ masters understood the signal. Convoy Commodore Dowding was still disbelieving, so Broome ordered *Keppel* to come alongside *River Afton*. Both Dowding and the ship’s master, Capt. Charlton, were still incredulous, but after hailing them, Broome shouted over that he had faith that the Admiralty had made the right decision, as they had the ‘big picture’. It was even harder for Broome as he had just received orders for *Keppel* and the other destroyers to leave the Close Escort and join Hamilton’s force. He finished his brief megaphone-aided conversation with Dowding by shouting over, ‘Sorry to leave you like this. Goodbye and good luck. It looks like a bloody business.’ Dowding replied, ‘Thank you. Goodbye, and good hunting.’

If it was to be a bloody business, it was not of Broome’s making. Until the Admiralty’s signals arrived, he had every faith that the convoy was going to make it through to Archangel. The next move was to split up the convoy escort. On Hamilton’s orders, Broome flashed a ‘Join Me’ signal to his destroyers, followed when they closed in with a more formal signal to his whole command. It read: ‘All escorts from *Keppel*. Convoy to scatter and proceed to Russian ports. Escorts – negative destroyers – proceed immediately to Archangel. Destroyers – join *Keppel*.’ Once they arrived, *Keppel* led the column northwards, away from the convoy, followed by *Fury*, *Leamington*, *Offa* and *Wilton*. The destroyer *Somali*, temporarily detached from Hamilton’s force, was also nearby since it had been refuelling from

After hoisting the signal for the convoy to scatter, Capt. Broome in *Keppel* steamed up to *SS River Afton*, flagship of the convoy commodore, so they could briefly talk the situation through before parting company. Line drawing by an anonymous crewman from *Keppel*, 1942.





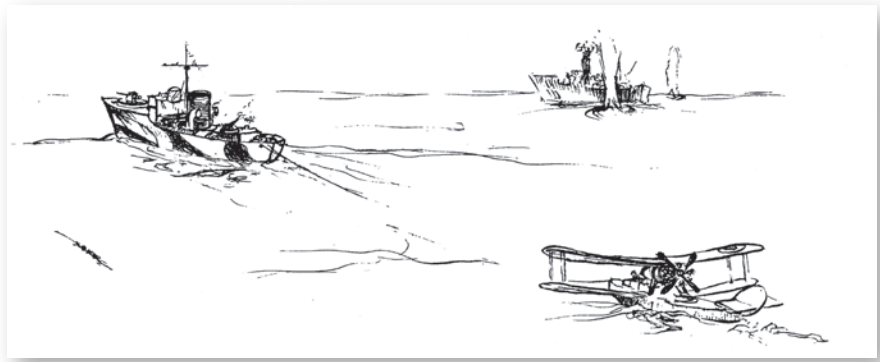
Aldersdale when the order to scatter was received. It too joined the column heading north.

The scattering of the convoy went ahead that evening, from 2215hrs, when Dowding gave the flag signal for it to begin. The process took the best part of an hour to complete. Every merchant ship's master had written instructions, outlining what to do, and despite the lack of practice in such an unexpected manoeuvre, it all went fairly smoothly. This was largely thanks to Dowding and his small signals staff, who supervised the whole procedure. By the end, the 32 merchant ships remaining in the convoy had fanned out over some 180° from the scatter point, heading away from it at top speed. Inevitably, this led to an immense degree of bad feeling. As one American put it later, 'The Limey Navy just turned and ran.' Many saw it as an utterly shameful act by the Royal Navy – a disgrace to its once-proud name. If the scatter order had been sent, then surely a major German surface attack was imminent. The consensus was that the merchant ships had simply been abandoned at a time when they needed all the protection they could get. This rancour would only become worse as events proved that the scatter order had been a calamitous mistake.

To the north-east, Rear Admiral Hamilton received the scatter order aboard *London*. He was just as horrified and disbelieving as Broome and Dowding. He turned towards the south, to contact Broome's destroyers. If *Tirpitz* was in the offing, then these five destroyers and escort destroyers would greatly improve his effectiveness. When Broome arrived, he was ordered to form up under Capt. Moore USN, the American destroyer flotilla commander who was embarked on USS *Wainwright*. This gave Hamilton two destroyer divisions, each of four warships, as well as his force of four heavy cruisers. By 2230hrs that evening, Hamilton was a few miles to the north-east of the convoy's scatter point. Despite the patches of icy mist drifting by, he was confident his cruiser's radar would pick up any approaching German surface group. However, he could not linger. His orders were to withdraw at speed, and so that is what he did. His force then turned west and headed away at 30 knots.

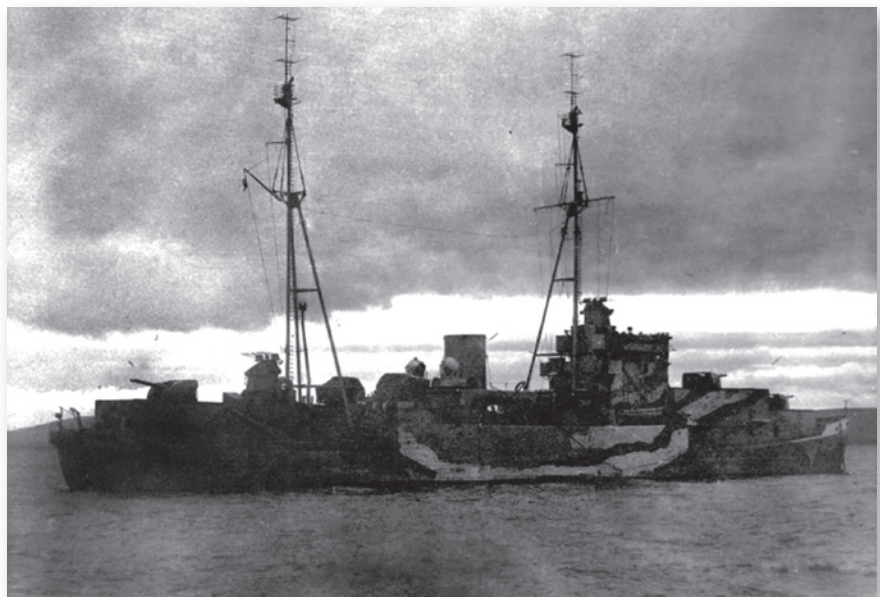
The sinking of an Allied merchant ship by a torpedo fired from a surfaced U-boat. Many of the merchantmen from PQ-17 that were sunk by U-boats had already been crippled by aircraft. In these cases, the U-boat merely delivered the *coup de grâce*.

At 2230hrs on 4 July, when Hamilton's cruisers withdrew to the west, the Walrus floatplane from HMS *Norfolk* was on patrol, and was then unable to find the cruiser to land. Instead, spotting *Palomares*, it landed nearby and was taken in tow. This tow continued for 600 miles, until it was winched aboard SS *Ocean Freedom*, and so reached Archangel. It returned with the freighter, and the Walrus and its two-man crew were eventually reunited with *Norfolk*. Line drawing by an anonymous crewman from *Keppel*, 1942.



No German ships appeared, though – only icebergs, which were veered around, and as Broome put it, ‘some very surprised U-boats who had been shadowing the convoy’. These U-boats were the reason the Admiralty had ordered Hamilton to withdraw at speed. However, as they raced past the scattered merchant ships, Hamilton knew how this would be viewed by the merchantmen: ‘We were, in the eyes of all those who did not know the full story, running away, and at high speed.’ By midnight, they were clear of the threat, but still there was no report of a German surface group. There was a general feeling that something was badly wrong. Then, at 0330hrs on 5 July, came the news they secretly feared most. The signal read: ‘It is presumed enemy ships are north of Tromsø but is not – repeat not – certain they are at sea.’

In other words, as there had been no actual German attack imminent, it seemed the convoy had been abandoned for no real reason, and was now unable to defend itself against the bomber and U-boat attacks that would surely come. Many of the Allied crews felt a sense of dishonour, and many wished they could break ranks, go back and help the merchantmen. On board USS *Wichita*, the actor-turned-mariner Lt. Fairbanks, Jr. asked, ‘Have the British become gun-shy?’ It was a stain of dishonour and an accusation of cowardice that for many would take years to fade. However, Hamilton’s



This view of ungainly ‘ack-ack’ ship HMS *Pozarica*, commanded by Acting Capt. (Ret.) Edward Lawford, was equipped with Type 286 air search radar, while its three twin 4in. gun turrets were directed by Type 282 fire control radar.



The crew of the Flower-class corvette HMS *La Malouine*, pictured in 1942. Although officially a Free French vessel, it was actually crewed by the Royal Navy after the fall of France, and commanded by Temp. Lt. Vivian Bidwell RNR, pictured here (centre) with his crew.

force continued to the west, to join up with Admiral Tovey. So, it was up to the small vessels of the Close Escort – the four armed trawlers, four corvettes, three minesweepers and two makeshift AA ships that had stayed put – to restore some honour to the Royal Navy.

These little ships set about their task as soon as the destroyers left them to it. Lt. Boyd of the corvette *Poppy* made for another corvette, Lt. Hall's *Lotus*. The two small escorts were then hailed by Capt. Lawford of *Pozarica*, who ordered them to form an anti-submarine screen around the largely defenceless merchantmen. They were also joined by the nominally Free French corvette *La Malouine*, which flew the French ensign, but had a British crew. The minesweepers *Britomart* and *Halcyon* were also ordered to join *Palomares*. The four little warships then headed towards the north-east, the direction of the pack ice. By 0300hrs, a Shad appeared, the floatplane shadowing them by flying in circles overhead. It was still there an hour later when they came across the rescue ship *Rathlin*, easily detected by its thick funnel smoke. It was carrying survivors from *Navarino* and *William Hooper*, and gratefully joined the little group of escorts.

Capt. Lawford of *Pozarica* was a 55-year-old retired naval officer, who had been promoted in 1941, and given command of the fruit carrier converted into a destroyer-sized AA escort. Now he had the task of keeping his small band of escorts safe, and to try to gather as many merchant ships under his wing as he could find. Having scattered, heading on their pre-arranged course, many merchant ships then turned about when they found themselves alone, and while some headed directly towards Archangel, others moved closer to the pack ice. For most of them, the ice represented their best chance, by putting as much distance between them and the German airfields as they could. Inevitably, some came across other merchantmen, and like Lawford's warships, they clustered together for mutual protection. Meanwhile, the Germans were now aware that the convoy had scattered and were moving in for the kill.

Losses to the scattered convoy, 5–10 July 1942

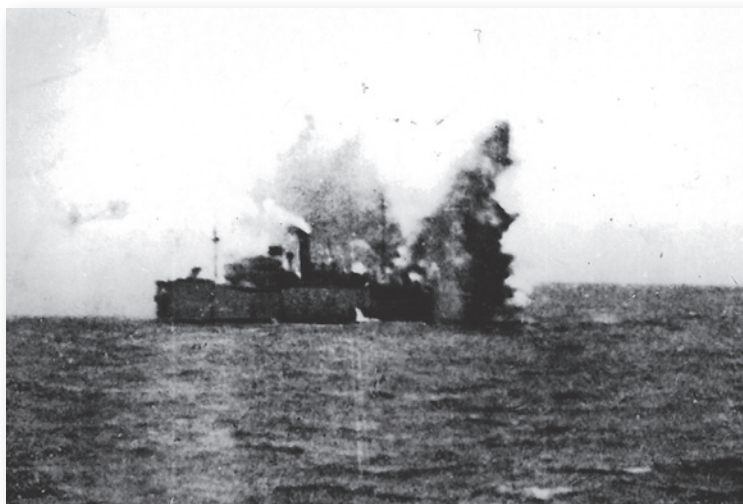


Just after midnight on 5 July, Kptlt. Max-Martin Teichert in *U-456* reported sighting Hamilton's cruisers and destroyers heading west at high speed. Wolfpack Eisteufel was ordered to sweep towards the east, to locate the convoy. Then, from around 0040hrs, Bv 138 floatplanes from KüFlGr-406 reported seeing individual merchant ships, heading in seemingly random directions. In the headquarters of Admiral Hubert Schmudt in Kirkenes, not far from North Cape, this helped corroborate the confusing signals intelligence they had gathered. By 0100hrs, it was apparent that the convoy had broken formation, and its ships were now largely defenceless. After notifying his superiors in Sengwarden and Berlin, Schmudt passed the conclusion on to the wolfpack and to the Luftwaffe. As the Kriegsmarine's Admiral Arktis in charge of operations in the Barents Sea, although he had no warships to command, he helped co-ordinate the attack on the convoy using the U-boats and bombers at his disposal. For once, there was a willingness for the Kriegsmarine and the Luftwaffe to work together, and that Sunday morning, this co-operation paid off handsomely.

The first blood went to the Kriegsmarine. It began less than an hour after the order was given to scatter. At 2250hrs, Kptlt. Hilmar Siemon's *U-334* surfaced close to the abandoned hulk of the Liberty ship *William Hooper*. He launched a torpedo from 1,200m, which merely clanged off the ship's hull. It was a dud. Siemon's second torpedo, launched four minutes later at 2303hrs, went wide and missed the target. With that, Siemon's crew opened up with their deck gun, and sank the ship that way. Siemon also came across the abandoned British freighter *Navarino*, but claimed that after launching two torpedoes at it at 0720hrs on Sunday morning, the *Navarino* sunk of its own accord before they hit their target. Siemon's torpedo crew was not having a particularly good day that Sunday. Things improved by the late afternoon, though, when *U-334* came across the 7,200-ton freighter *Earlston* from Newcastle. This time, the boat launched two torpedoes, and both struck home at 1747hrs. Once the ship sank, *Earlston's* master, Hilmar Stenwich, and three gunners were taken prisoner. The other 47 crewmen took to the boats.

At 0800hrs, Kvtkpt. Karl Brandenburg in *U-457* surfaced beside *Christopher Newport*, which had been abandoned the previous evening, and sank it with a single torpedo at 0808hrs. At the same time, about 150nm to the south, Kptlt. Heino Bohmann of *U-88* was busy chasing another American-flagged ship, the *Carlton*, which had scattered to the west-south-west. It had spotted the U-boat earlier at 0715hrs, and turned away to the south. So, Bohmann was forced to chase it – a pursuit that lasted for three hours before the U-boat could overhaul it. At 1008hrs, *U-88* drew within range, and launched a single torpedo at long range. It hit the *Carlton*, but it was another dud, and did not

British-flagged merchantman *SS Navarino* had been badly damaged in an air attack, and when torpedoed by *U-334* on the morning of 5 July, the merchantman was already sinking. This photograph taken from the U-boat shows the detonation on the abandoned and already settling ship.



American-flagged SS *Carlton*, weighing 5,127 tons, was from New Orleans, and was carrying a cargo of tanks, fuel, explosives and food when the freighter was torpedoed on 5 July by *U-88*. The survivors from its crew were eventually captured and interned.



explode. Bohmann launched another, and at 1015hrs, it struck the steamer amidships on the starboard side. The explosion set off the fuel stored in a tank there, and the blaze spread rapidly through the ship. *Carlton's* master, Ragnvald Hansen, gave the order to abandon ship. Two men had been killed when the torpedo struck, but the remaining 44 took to the last undamaged lifeboat, and four Carley floats, which they lashed together to form a makeshift raft. The ship sank ten minutes later. By then, *U-88* was heading off towards the north-east in search of easier pickings. Bohmann would find another victim, too, late that evening, when he caught up with the damaged American Liberty ship *Daniel Morgan*.

Wolfpack Eisteufel's work that morning still was not over. It had been ordered to sweep eastwards across the Barents Sea, operating on the surface so direct radio links with its headquarters were able to pass on any sighting reports from Luftflotte 5. For the most part this worked well, despite the delays in passing on the aircrews' information. One of the early victims of the wolfpack was the British merchantman *Empire Byron*, which had been damaged during the air attacks of the previous evening. It had been hit by a torpedo dropped by a Heinkel. Although the merchantman did not explode, the hit caused some flooding and minor engine damage to the Sunderland-registered ship, which began to lag behind the convoy, even before it scattered. So, *Byron's* experienced master, John Warton, kept heading towards the north-east, to reach the edge of the pack ice between Spitzbergen and Novaya Zemlya.

However, at around 0750hrs on the morning of Sunday 5 July, the ship was sighted by Kptlt. Heinz Bielfeld of *U-703*. Bielfeld had little difficulty overhauling the merchantman. At 0827hrs, the U-boat launched a single torpedo, which hit the *Empire Byron* amidships on the port side. Nine of the crew and a passenger were killed when the torpedo hit. Warton ordered his crew to abandon ship, and they took to the boats. A little later, the corvette *Dianella* rescued the master, 54 crew and six passengers, who were military staff bound for Archangel. They would eventually complete their journey in the overcrowded corvette. An eighth member of the military party, Capt. Rimington of the Royal Electrical and Mechanical Engineers (REME), was blown over the side in the blast but was fortunate enough to be rescued by the U-boat. He had been sent to Russia to instruct the Soviets in the workings of the Churchill tank. Now the tanks carried in the *Empire Byron* were lost to the sea. Once Rimington was hauled aboard, Bielfeld continued to the east, hunting for other victims. His next kill would come

later that evening, when he came across the convoy commodore's ship, the *River Afton*.

Meanwhile, the German airfields at Banak, Bardufoss and Kirkenes were all but empty, as most of the He 111s of KG-26 and Ju 88s of KG-30 were already ranging out across the Barents Sea in search of targets. The remaining ships of the convoy were still scattered, but by mid-morning on 5 July, a few of them had come across others, and were grouping together for mutual support. Four of them, *Fairfield City*, *Daniel Morgan*, *Benjamin Harrison* and *John Weatherspoon*, also came upon the group of escorts grouped around *Pozarica*, and their masters were happy to steam alongside the escorts, which offered some protection. Overhead, the Shads were shadowing them, while others were fanning out across the Barents Sea, trying to locate other scattered ships. When Lt. Harry Hall of *Lotus* suggested they actively seek out other merchant ships, Capt. Lawford of *Pozarica* was reluctant to gather more together, given the still viable threat of a surface attack. However, he released *Lotus* to seek out whatever merchant ships could be found. Some merchant crews refused any help from the Navy. When Lawford ordered the SS *Bellingham* to join him, the ship's American master told *Pozarica*'s captain to: 'Go to Hell!'

Meanwhile, to the north-east, the merchant ships *Bolton Castle*, *Paulus Potter* and *Washington* had all grouped together, and their masters decided to head north towards the pack ice, then follow it eastwards towards Novaya Zemlya. Others had the same idea. That morning, Acting Lt. Leo Gradwell, commanding the ASW trawler *Ayrshire*, rounded up three American merchantmen, *Ironclad*, *Silver Sword* and *Troubador*, on his way to the north-east. On reaching the pack ice at around 0940hrs that morning, Gradwell found an inlet and moved deep into it. There the ships shut down their engines, planning to wait out the inevitable bloodbath that would follow the scattering. As a precaution, Gradwell also painted his trawler white, by way of camouflage, and the three merchant crews soon followed his example. There they sat out the day, in relative peace and safety.

Farther to the south, though, the German aircraft were finding no shortage of targets. Everywhere, the shadowing Bv 138s circled and sent directions to the bombers. At 1000hrs on 5 July, a flight of Ju 88s from III/KG-30 spotted a lone tanker, and dropped down to carry out a bombing run. It was RFA *Aldersdale*. Three of the aircraft missed, but the fourth scored a hit on the oiler's stern, which exploded in the engine room, effectively putting it out of action. The tanker began taking on water, but Master Archie Hobson supervised the damage control parties. It was fortunate that *Aldersdale* was spotted by the minesweeper *Salamander*, which came alongside to rescue the crew. Lt. Wilfred Muttram's crew then towed the damaged tanker, and headed east. After an hour, though, it was clear that the *Aldersdale* was still afloat, so Hobson's chief engineer returned on board, to see what could be done. He returned a few minutes later and declared the task of repairing the damaged tanker impossible.

So, *Aldersdale* was abandoned for the second time that morning. The crew of *Salamander* tried to sink it using their pair of 4in. guns, but were unable to, so the ship was left to drift. At 1130hrs, U-457 came across the abandoned oiler, and KrvKpt. Brandenburg ordered his men to shell it with their 88mm deck gun. It proved a near-hopeless task, and at 1256hrs, Brandenburg finally hit the *Aldersdale* with a pair of torpedoes. These broke the oiler in two, but it took another 20 minutes for the ship to sink.

Meanwhile, the air attacks continued. At 1030hrs, it was the turn of *Pan Kraft*, an elderly American freighter crewed almost entirely by Filipino sailors, with crated aircraft and explosives in its holds. Four Ju 88s bombed it, and although all the sticks of bombs missed, two exploded close by. These ruptured the engine fuel and steam lines, and brought the ship to a halt. A fire also broke out. Master Jacob Jacobson ordered his crew to abandon ship. The corvette *Poppy* found them in two boats, close by their stricken ship, which was drifting close to the pack ice. Lt. Hall of *Poppy* was all for sinking the freighter with his 4in. gun, until Jacobson warned him about the explosives on board. So, Hall simply gathered the 29 survivors on board, then sailed off, looking for more ships from the convoy. *Pan Kraft* continued to burn, pinned against the expanse of pack ice before the explosives went off at 0600hrs the morning of 7 July, and the freighter blew up. The explosion was heard by Lt. Gradwell of *Ayrshire*, still hiding amid the ice several miles to the west.

After the attack on *Pan Kraft*, there was a lull in the air attacks as the bombers returned to base to refuel and rearm. This would continue until the early afternoon. Meanwhile, the scattered merchant ships continued to head eastwards towards safety, or northwards to skirt the pack ice. At noon, the sky was amazingly clear and visibility was good – perfect conditions for the Shad aircrews who were still circling over the little clusters of merchant ships and escorts. Another small group of escorts was made up of the ASW trawlers *Lord Austin*, *Lord Middleton* and *Northern Gem*. Led by Lt. Bob Jameson of *Lord Middleton*, the three small escorts headed north-east, towards the pack ice, where they hoped to round up some of the merchant ships. The corvettes *Poppy* and *Lotus* and the minesweeper *Halcyon* were also in the same area, performing the same task. None of these small escorts, though, had the firepower needed to fend off a determined air attack. *Palomares* was also heading east, and would link up with Lawton and *Pozarica* the following morning.

This was a terrifying time for the merchant crews, as most of the escorts abandoned them, and in the clear, bright sky the near-constant speck of a Shad flying overhead did little to allay their fears. Lookouts were looking aft, too, for the tell-tale white bow wave of an approaching U-boat. These boats could make about 14 knots at full speed, so they could overhaul all but the fastest merchant ships in the convoy. Sure enough, a little before

Armed anti-submarine trawler HMT *Northern Gem*, commanded by Skipper Lt. William Mullender RNR, was extremely active in the rounding up of merchantmen from PQ-17, and then escorting them first to Novaya Zemlya, and then to Archangel.





Although several Allied warships among PQ-17's escorts were fitted with air-search radar sets, these were not infallible, and so lookouts were still of great value, whether to detect shadowing U-boats or approaching enemy aircraft. The range and bearing information they provided then allowed the ship's weapons to be trained onto the target.

1400hrs, Kptlt. Max-Martin Teichert in *U-456* sighted the elderly American cargo ship *Honomu*, some 150nm south-east of the convoy's scatter point. He caught up with the freighter and at 1432hrs, he hit *Honomu* with a single torpedo, which struck the starboard side, ripping open one of the holds and killing two crewmen. The ship listed heavily, and Master Frederik Strand ordered his men to take to the boats.

Then, as the ship began to settle, a second torpedo struck slightly farther aft. The *Honomu* began sinking fast by the stern. The 39 survivors got clear in a lifeboat and four Carley floats. Teichert cruised up alongside them and ordered Strand aboard the U-boat. With his prisoner secure, the U-boat crew handed over bread and water before making off. It would be a long ordeal for the survivors. The rafts and the lifeboat became separated, and while all but one of the men on the rafts were eventually rescued by a British escort, the lifeboat remained alone at sea for another 23 days. By the time they were rescued by *U-209*, 11 of the 19 men aboard had died of exposure. The rest, like their captain, became prisoners of war.

By the time *Honomu* sank, the German bombers were returning. That morning flying operations by KG-26 and KG-30 had been almost haphazard, with the bombers operating in small groups. Their flight leaders relied on being passed sighting reports from either the scouting Bv 138s of KüFlGr-406 and -906, or from U-boats. By that afternoon, the *Kampfgeschwader* switched to a more methodical search, with each responsible for a sector of the Barents Sea. This stretched from 30° to 45° east, some 330nm across, and extending as far north as the pack ice, about 440nm to the north of North Cape. However, it was unlikely that any merchant ships would be within 200nm of the Norwegian coast, which limited the search area. KG-26 searched the left-hand sector, and KG-30 the right-hand one, with each sector covering an area up to 165nm wide and 240nm long. However, earlier sightings had suggested most merchant ships were either heading east towards Novaya Zemlya or were clustered around the edge of the pack ice. This, then, is where most of the bombers headed.

The four merchant ships accompanying the escorts grouped around the *Pozarica* parted company amid newly arrived patches of icy mist, as they were







LIEUTENANT GRADWELL'S FLOCK, 20 JULY 1942 (PP. 66–67)

When the convoy scattered on the evening of 4 July, each merchant ship followed a pre-determined compass bearing. The small escorts that were to accompany the convoy to Archangel followed them, and tried to offer what protection they could. One of these was the HMT *Ayrshire*, an armed trawler under the command of Lt. Gradwell RNVR, who had been a lawyer before the war. On the morning of 5 July, he came across three American merchant ships to the north of the scatter point. So, he took *SS Ironclad*, *SS Silver Sword* and *SS Troubador* under his protection. Gradwell led them to the edge of the pack ice, where they hid for a time in an ice inlet, to avoid prowling U-boats. Once there, Gradwell ordered the crews to whitewash their ships to camouflage them against the pack ice. Then, on 8 July, they set off again, heading east across the Barents Sea towards the immense ice-clad island of Novaya Zemlya. They reached it safely on 11 July, and anchored 20 miles up Matochkin Strait, halfway down the island's western coast. Navigation was tricky without

accurate charts, and after two of his charges grounded and had to be floated off, Gradwell decided to stay there and await help.

Over the next few days, other ships arrived – Soviet icebreaker *Murman*, Soviet armed trawler *Kerov*, and two merchant ships, *SS Benjamin Harrison* and Soviet tanker *Azerbaijan*. Soon, all eight ships were anchored deep in the ice-ringed strait. It was there on 20 July that Commodore Dowding found them, after leading three corvettes into the waterway. From there, the whole force headed south, and eventually reached Archangel without loss four days later. This shows the makeshift anchorage halfway up the strait that bisected Novaya Zemlya. Gradwell's *Ayrshire* (1) is seen preparing to anchor, with its three original charges *Ironclad* (2), *Silver Sword* (3) and *Troubador* (4) close by. The other newcomers are anchored farther down the Strait. Further astern, around the bend of the strait is the corvette HMS *Poppy*, carrying Commodore Dowding. Thanks largely to the initiative of Gradwell, at least part of the convoy would make it safe into Archangel.

heading towards Archangel, and the escorts were making for the Matochkin Strait, in the centre of Novaya Zemlya. The shadowing floatplanes kept both groups company, though, despite one being shot at when it flew within range of the *Daniel Morgan*. The position of these four American merchant ships was duly passed on to Banak airfield, and then shared with the Ju 88s of KG-30, which were quartering the area in search of targets. The bombers' first victim was *Fairfield City*. It was hit by three bombs, which wrecked the engine room, blowing a hole in its side. The merchantman began sinking, taking eight of the crew with it, but the rest managed to scramble into the two remaining lifeboats and push themselves clear before the ship sank.

A few miles to the north, the 7,000-ton British-flagged *Earlston* spotted the bizarre sight of a small ice floe, which on examination turned out to be a stalking U-boat, with a white-painted conning tower. Master Hilmar Stenwich called for full speed and turned away, while his deck gunners opened up on the U-boat, which eventually forced it to submerge. *Earlston* raced away to the south-east, having escaped its pursuer. However, at around 1545hrs, two groups of Ju 88s of III/KG-30 were sighted, moving in for an attack from each beam. The same gunners opened up again, and drove off two of the bombers. Then, a near miss exploded close beside the port quarter, and the blast sprung plates in the stern, and jolted the engine. The ship began losing power, and so Stenwich had little choice but to order his men to abandon ship. While some of the bombers returned home, the others circled overhead, to make sure the merchantman was sinking.

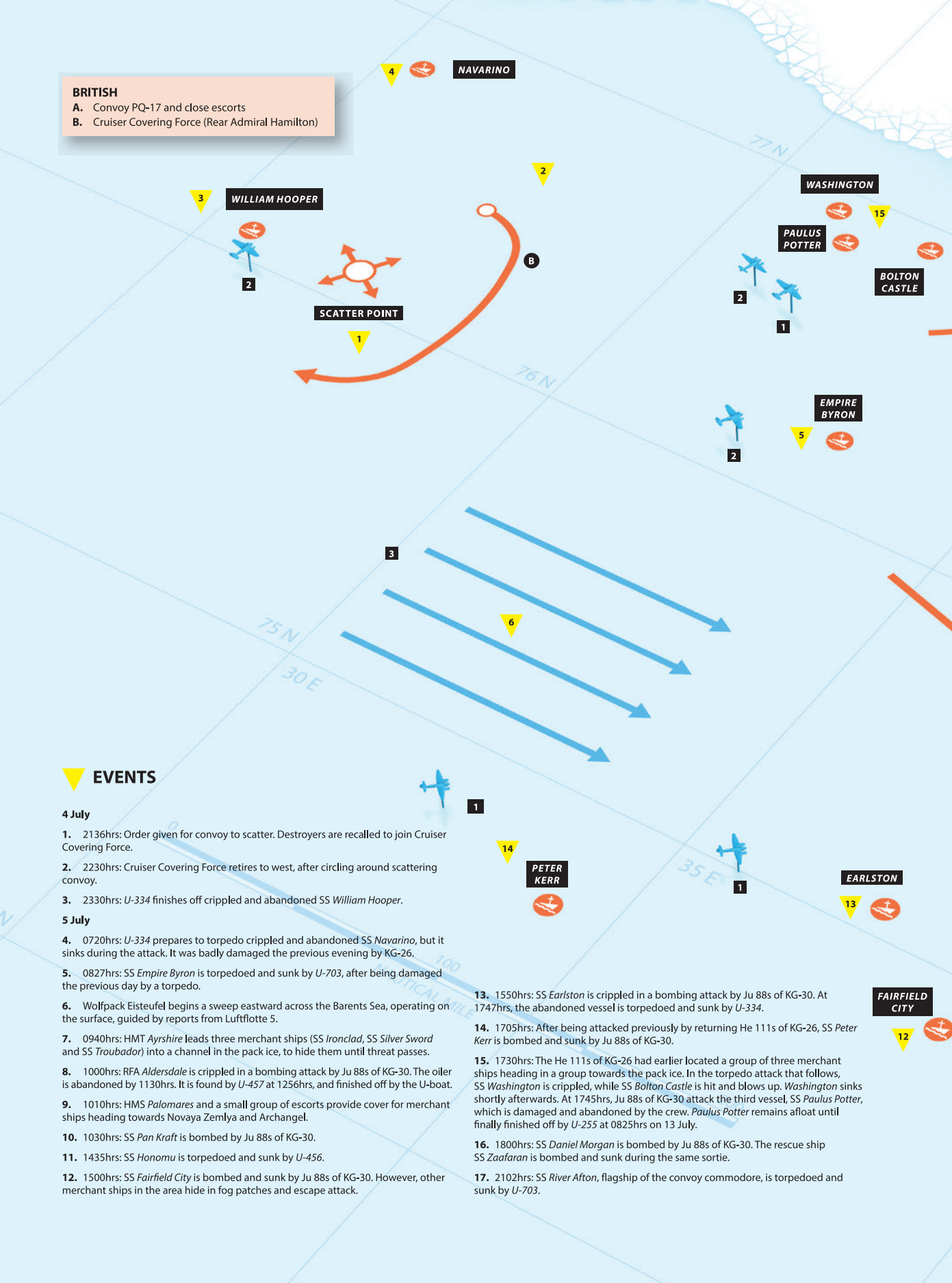
Earlston remained afloat, though, despite abandonment by the crew. Then, at 1740hrs, the white-painted conning tower of a U-boat surfaced a short distance away from the stricken vessel. It was Oblt. Hilmar Siemon's U-334. At 1747hrs, Siemon delivered the *coup de grâce*, sinking the merchant ship with a spread of two torpedoes. It was Siemon's second victim from the convoy, the other being the *William Hooper*, sunk late the previous evening. Meanwhile, a dozen or so miles to the west, there was a huge explosion, which could be seen from the U-boat.

It was the American-flagged merchantman *Peter Kerr*. It had been attacked by seven He 115 floatplanes of I/KüFlGr-906, spotted while out searching for survivors from the *Carlton*. This opportunistic attack by passing aircraft started at around 1640hrs, and was foiled by some deft ship handling. *Peter Kerr* successfully dodged at least six torpedoes. However, this attracted the attention of a flight of four Ju 88s from II/KG-30. They bombed the ship from high altitude, and at 1705hrs, they scored three hits and several near misses. *Peter Kerr* was left disabled, flooding and on fire. Wisely, Master William A. Butler ordered his crew into the two undamaged lifeboats, as the ship was laden with ammunition. As they were pulling away, the freighter exploded with a thunderclap that could be heard for miles. Amazingly, none of the vessel's 36-man crew or 12 US gunners had been hurt. Then, a Ju 88 dropped down to make a low pass over the boats. Assuming they were about to be strafed, some survivors jumped into the water. As it turned out, the airmen were merely taking photographs, and after capturing their images, the pilot gave a friendly wave and flew off.

As the survivors of *Peter Kerr* were being photographed, another dramatic attack was under way just over 300nm to the north. That afternoon, four freighters had teamed up, in a bid to reach the relative safety of the pack ice. One of them, *Olopana*, had dropped behind, and so was spared what

BRITISH

- A. Convoy PQ-17 and close escorts
- B. Cruiser Covering Force (Rear Admiral Hamilton)



EVENTS

4 July

1. 2136hrs: Order given for convoy to scatter. Destroyers are recalled to join Cruiser Covering Force.
2. 2230hrs: Cruiser Covering Force retires to west, after circling around scattering convoy.
3. 2330hrs: U-334 finishes off crippled and abandoned SS *William Hooper*.

5 July

4. 0720hrs: U-334 prepares to torpedo crippled and abandoned SS *Navarino*, but it sinks during the attack. It was badly damaged the previous evening by KG-26.
5. 0827hrs: SS *Empire Byron* is torpedoed and sunk by U-703, after being damaged the previous day by a torpedo.
6. Wolfpack Eisteufel begins a sweep eastward across the Barents Sea, operating on the surface, guided by reports from Luftflotte 5.
7. 0940hrs: HMT *Ayrshire* leads three merchant ships (SS *Ironclad*, SS *Silver Sword* and SS *Troubador*) into a channel in the pack ice, to hide them until threat passes.
8. 1000hrs: RFA *Aldersdale* is crippled in a bombing attack by Ju 88s of KG-30. The oiler is abandoned by 1130hrs. It is found by U-457 at 1256hrs, and finished off by the U-boat.
9. 1010hrs: HMS *Palomares* and a small group of escorts provide cover for merchant ships heading towards Novaya Zemlya and Archangel.
10. 1030hrs: SS *Pan Kraft* is bombed by Ju 88s of KG-30.
11. 1435hrs: SS *Honomu* is torpedoed and sunk by U-456.
12. 1500hrs: SS *Fairfield City* is bombed and sunk by Ju 88s of KG-30. However, other merchant ships in the area hide in fog patches and escape attack.

13. 1550hrs: SS *Earlston* is crippled in a bombing attack by Ju 88s of KG-30. At 1747hrs, the abandoned vessel is torpedoed and sunk by U-334.

14. 1705hrs: After being attacked previously by returning He 111s of KG-26, SS *Peter Kerr* is bombed and sunk by Ju 88s of KG-30.

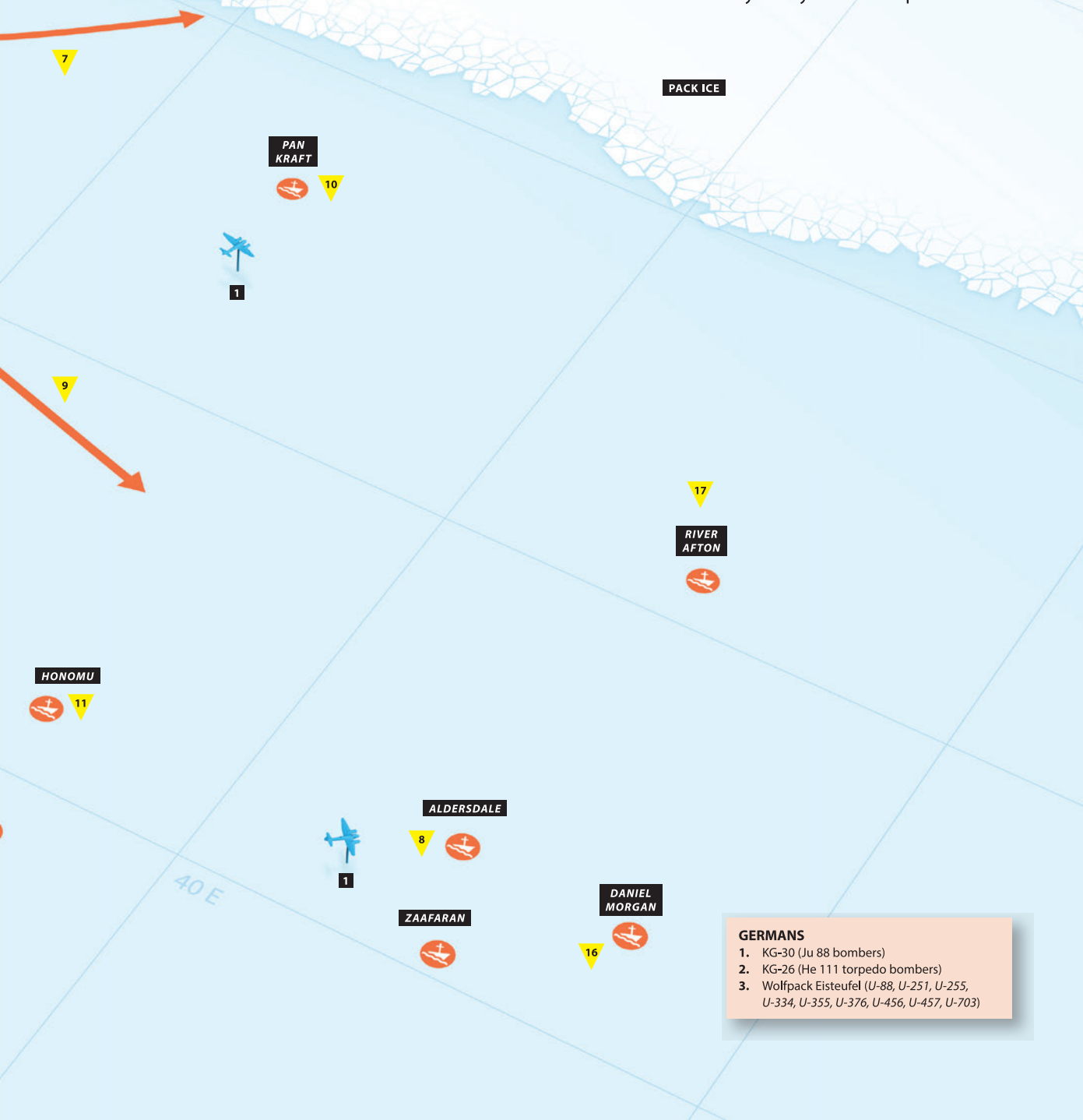
15. 1730hrs: The He 111s of KG-26 had earlier located a group of three merchant ships heading in a group towards the pack ice. In the torpedo attack that follows, SS *Washington* is crippled, while SS *Bolton Castle* is hit and blows up. *Washington* sinks shortly afterwards. At 1745hrs, Ju 88s of KG-30 attack the third vessel, SS *Paulus Potter*, which is damaged and abandoned by the crew. *Paulus Potter* remains afloat until finally finished off by U-255 at 0825hrs on 13 July.

16. 1800hrs: SS *Daniel Morgan* is bombed by Ju 88s of KG-30. The rescue ship SS *Zaafaran* is bombed and sunk during the same sortie.

17. 2102hrs: SS *River Afton*, flagship of the convoy commodore, is torpedoed and sunk by U-703.

ATTACKS ON THE SCATTERED MERCHANT SHIPS, 5 JULY 1942

At 2136hrs on 4 July, the order was given for the convoy to scatter. All warships apart from the smaller escorts would withdraw to the west. Then the merchant ships would fan out at full speed, before heading independently towards a Russian port. From that moment on, it was every ship for itself. Inevitably, some merchantmen grouped together for mutual protection, or clustered around some of the remaining escorts. Shadowing U-boats quickly reported the dispersal, and this was soon confirmed by Luftwaffe reconnaissance aircraft. After a relatively uneventful night, the air attacks began in mid-morning on 5 July, and continued throughout the day. The U-boats of wolfpack Eisteufel also moved in for the kill, with the U-boats ranging as far north as the pack ice in search of their prey. The decision to scatter would prove to be extremely costly in both ships and crew.



GERMANS

1. KG-30 (Ju 88 bombers)
2. KG-26 (He 111 torpedo bombers)
3. Wolfpack Eisteufel (U-88, U-251, U-255, U-334, U-355, U-376, U-456, U-457, U-703)

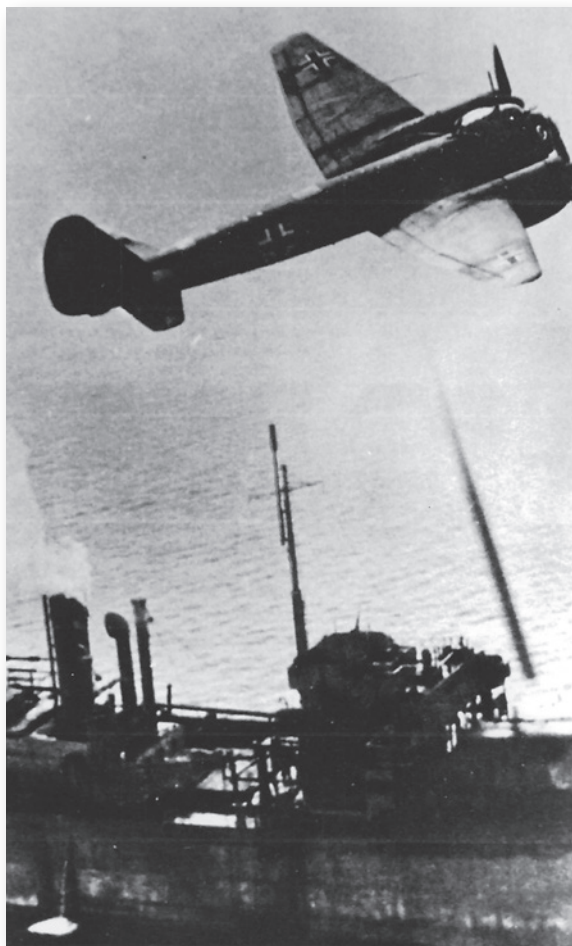
followed. The others, the British *Bolton Castle*, the American *Washington* and the Dutch-flagged *Paulus Potter*, remained together and by 1700hrs, they were close to the line of ice stretching away to the North Pole. They had been bombed earlier, small impromptu attacks by Ju 88s and He 111s, operating singly or in small groups. However, the combined anti-aircraft fire of the three ships had kept the German aircraft at bay, although both *Washington* and *Bolton Castle* had been damaged slightly from near misses. Just after 1700hrs, another lone Ju 88 of I/KG-30 made a low-level bombing run on *Washington*. The bombs missed, but the bomber strafed the merchant ship.

Then, some 30 minutes later, four more Ju 88s appeared, and launched a simultaneous bombing run from two directions. This time, although no hits were achieved, several bombs were near misses, and their detonations damaged the ship's steering gear, and sprung its hull plates. *Washington* began taking on water and was soon listing heavily. At that point, Master Julius Richter gave the order to abandon ship. The crew got away in two lifeboats, then turned to watch as the Ju 88s continued to strafe their sinking ship. Again, the four bombers circled the stricken vessel, taking pictures, before waving at the survivors and flying off. Then it was the turn of *Bolton Castle*, which had already suffered minor flooding from near misses earlier that afternoon.

The crew had showed spirit firing at their attackers, but now they were overwhelmed, as eight Ju 88s of II/KG-30 dived at them, and a stick of bombs smashed through the covers of the No. 2 hold, detonating the munitions stowed there. The resulting blast and fire proved unstoppable, and so veteran Master John Pascoe ordered the men to take to the boats, which had already been swung out. Again, the survivors watched as the Germans strafed and photographed the merchantman's sinking. Meanwhile, a mile away to the south-west, the Rotterdam-built *Paulus Potter* was also bombed and was disabled by near misses from Ju 88s of III/KG-30. With his ship flooding fast, the master, Wilhelm Sissingh, told his crew to abandon ship. The 65 crewmen and gunners and six Russian passengers got away and, like the others, their boats set course towards the east. Amazingly, *Paulus Potter* would remain afloat for several days before finally being sunk by a passing U-boat.

The attention now shifted to the south-east, and *Daniel Morgan*. The Ju 88s operating close to the pack ice were only a small part of the *Kampfgeschwader* that was quartering the Barents Sea, hunting for other lone merchant ships. Several of them had attacked *Daniel Morgan* that afternoon, and although these bombs had all missed, the ship had been damaged slightly from near misses. The crew had seen *Fairfield City* sunk, but so far their own luck had held. Then, just before 1800hrs that evening, five

A Ju 88 of KG-30, pictured by another bomber during a bombing run on British-built, Dutch-flagged merchant ship SS *Paulus Potter* of Rotterdam. The 7,126-ton ship was badly damaged in the attack, after being hit by two bombs. The crew then abandoned ship. The abandoned vessel was eventually sunk by U-255 on 13 July.



Ju 88s of III/KG-30 approached the merchantman from the west. Master George Sullivan and his crew were taken by surprise as they came out of the sun. A stick of bombs straddled the ship, and three near misses sprung the hull plating on the starboard quarter, beside Nos. 4 and 5 holds. The gallant ship flooded and began listing heavily.

Sullivan had lost one crewman in the attack, but he sent the rest to the boats. Two more were drowned when a boat capsized, but 52 survivors were able to watch their ship settle in the water. Surprisingly, *Daniel Morgan* remained afloat. The crippled and abandoned hulk was found at 2250hrs that evening by Kptlt. Bohmann's U-88. He delivered the final blow with two torpedoes, and at 2252hrs, *Daniel Morgan* sank by the stern. As Bohmann continued to the west, he came across Sullivan's three lifeboats. The Germans stopped and questioned the American survivors, then told them to follow them in the direction of the Norwegian coast. However, when the U-boat pulled away, Sullivan turned his lifeboats to the east, and the coast of Novaya Zemlya.

Another victim that evening was the rescue ship *Zaafaran*. It had been in company with the British-flagged merchantman *Ocean Freedom*, while nearby was the minesweeper *Salamander*, which had been supporting *Aldersdale* after it was sunk. For some reason, *Ocean Freedom* was spared when a lone Ju 88 from III/KG-30 spotted the two vessels, streaming to the south-east, in the wake of *Daniel Morgan*. It began a low-level run on *Zaafaran*. At 1814hrs, the rescue ship was straddled, and while it was not hit directly, one very near miss off the starboard side sprung its plates, and it began flooding rapidly. The engine rooms filled, and the ship began settling fast. Master Charles McGowan had to fight to restore order among the rescued survivors of other ships, but rafts were launched, and the men abandoned ship. *Zaafaran* sank four minutes later. Surprisingly, only one man had been lost in the attack. The second rescue ship, *Zamalek*, eventually rescued them.

The last costly drama of that long and horrendous day took place a little after 2100hrs, about 100nm to the north. That was when Kptlt. Bielfeld's U-703 came across *River Afton*, heading east in an otherwise empty sea. The ship had been spared the ravages of the Luftwaffe, but now Bielfeld's U-boat, having sunk *Empire Byron* that morning, slowly overhauled the Clyde-built ship as the long evening wore on. *River Afton* was the flagship of Convoy Commodore John Dowding, or at least it had been until the previous evening when the convoy scattered. The ship's master, Harold Charlton, had taken his ship off to the north-east, and was now following a more south-easterly course, heading for the Matochkin Inlet in Novaya Zemlya. He expected to make landfall there the following afternoon. They had not spotted U-703 making its approach on the surface, hidden by the low midnight sun. At 2102hrs, a single torpedo, launched from 3,000m off the starboard quarter, hit *River Afton*. It struck aft, blowing a hole in the side of the engine room, killing many of the men inside, and cutting power and light throughout the ship.

Charlton and his men did what they could to save the vessel, and to rescue the survivors from the engine room. Then at 2122hrs, a second torpedo struck them, piercing the side of the boiler room, a little forward of the first hit. The men there were killed or wounded, or thrown into the water. That second explosion broke the ship in two, and Charlton ordered his men







THE GERMAN SURFACE GROUP PREPARING TO PUT TO SEA, MORNING OF 5 JULY 1942 (PP. 74–75)

In the eyes of the British Admiralty, the biggest threat to Convoy PQ-17 was the powerful Kriegsmarine surface group stationed in northern Norway. At its heart was battleship KMS *Tirpitz*, sister ship of the ill-fated *Bismarck*, which also served as the flagship of Admiral Otto Schniewind, commander of all Kriegsmarine's naval forces in the region. At his disposal were the armoured cruisers *Lützow* and *Admiral Scheer* – sisters of the 'pocket battleship' *Graf Spee* – the heavy cruiser *Admiral Hipper*, and a dozen destroyers. Schniewind planned to use them in a bold attack on the next Russia-bound convoy – an attack he had codenamed Operation *Rösselsprung*. These ships were deployed near Trondheim and Narvik, but when Convoy PQ-17 was sighted on 1 July, Schniewind ordered his forces to assemble in the Altenfjord, near the northernmost tip of Norway. On the way though, *Lützow* and three destroyers ran aground, and so were unable to play their part in the operation.

However, shortly before noon on 5 May, Admiral Schniewind led his battlegroup to sea. Word had reached him that the convoy

had scattered, and so it would be entirely at his mercy. This shows the battlegroup transiting the Altenfjord at around 1300hrs on its way to the open sea. *Tirpitz* (1) is in the lead, with Schniewind's Admiral's Pennant flying from the foremast. Off its beam are two escorting destroyers, KMS *Richard Beitzen* to port and KMS *Friedrich Inn* (2) to starboard. Following astern of the battleship is heavy cruiser KMS *Admiral Hipper* (3), followed by armoured cruiser KMS *Admiral Scheer* (4), flagship of Schniewind's deputy, Vizeadmiral Oskar Kummetz. Following the battlegroup are two torpedo boats, Z-7 and Z-14 (5), which had been screening *Tirpitz* and *Hipper* the previous night, as they lay in the Kaafjord, the battleship's protected anchorage at the southern tip of the Altenfjord. Waiting to join the battlegroup are four destroyers, which have just emerged from the Langefjord, a southern arm of the Altenfjord. The whole force would continue to the open sea, preceded by minesweepers to make sure the way was clear. Then, nothing would lie between them and the hapless merchant ships.

to save themselves. Before he scrambled to safety, Dowding ditched his confidential papers over the side. A small jolly boat and several Carley floats were launched, and the men clung to them while their shipmates continued to abandon ship. Then the ship sank, leaving the sea full of dead, wounded and desperate crewmen. In all, 23 men went down with their ship when *River Afton* sank, including two of Dowding's staff and a passenger. The 33 survivors grimly watched the sinking, then set out for the distant shore of Novaya Zemlya. As they bobbed along, Dowding was amused when he overheard two seamen in the freezing water, clinging to a Carley float. When one of them started complaining, his shipmate turned and told him not to be 'so bloody wet!' The convoy commodore and the others were rescued an hour later by the corvette *Lotus*.

That evening, as the last of the bombers returned to their airfields, a relative calm descended over the Barents Sea. U-boats were still combing it, looking for stragglers, while the remaining merchant ships and escorts doggedly headed east, seeking some degree of safety. Dozens of Carley floats and lifeboats bobbed in the ice-cold water, as the survivors sought rescue. That day had been a singularly grim one for the Allies. A total of 13 merchant ships and a rescue ship had been sunk since the order to scatter had been given. Others would follow them to the bottom in the days that lay ahead. If the convoy had remained intact, despite the ferocity of these attacks, most of those involved reckoned the losses would have been considerably less. In the airfields of Banak, Bardufoss and Kirkenes, the Luftwaffe aircrews had every reason to toast their heady achievements.

NOVAYA ZEMLYA

That same evening, Sunday 5 July, 350nm to the south-west of the spot where *River Afton* sank, the battleship *Tirpitz* was at sea, surrounded by a screen of destroyers, with the two armoured cruisers following in the battleship's wake. On the Admiral's bridge, Schniewind was relieved that after three days of prevarication, Operation *Rösselsprung* had finally been allowed to go ahead. It was ironic that the mere latent presence of the battleship, having moved north from Trondheim, had achieved the operation's objective, even while it was still moored in the Altenfjord. Schniewind had planned a devastating assault on the convoy, which would force it to break formation. This then, would leave its merchant ships at the mercy of the Luftwaffe, wolfpack Eisteufel and *Tirpitz*. Now, with that achieved without even having to put to sea, all that was left to Schniewind was to pick off whatever the bombers and U-boats had left behind.

The delay had been because the German High Command, in thrall of the overcautious Adolf Hitler, had decided not to risk the German surface group if this placed it within range of the British aircraft carrier *Victorious*. At 0655hrs on 4 July, the carrier was sighted by a German reconnaissance aircraft, together with the rest of Tovey's force, 200nm north-west of Bear Island. This effectively placed it well beyond reach of the German battlegroup if it sortied into the Barents Sea. The request to commence *Rösselsprung* was passed on to Naval Headquarters in Berlin, and then on to Hitler for his approval. This was finally given by Hitler the following morning. By 1100hrs on Sunday 5 July, Schniewind's battlegroup was ready for sea. So,

Crewmen from armed ASW trawler HMT *Northern Gem* pictured after arriving in Matochkin Strait. Behind them is the rescue ship SS *Zamalek*, which also helped to shepherd stray merchant ships from the scattered convoy into this temporary safe haven.



when the confirmation reached Schniewind at 1130hrs, signal lamps flashed, and the German warships got under way. It took time to weave their way through the Altenfjord, with Schniewind opting for the Rolvsøy exit to the fjord beyond Hammerfest. By 1500hrs on Sunday afternoon, the German battlegroup was in the open sea, heading east-north-east, and making 25 knots. Schniewind was determined that his surface warships would play their part in the slaughter.

This sortie, though, didn't go unnoticed. A little after 1700hrs, *Tirpitz* was spotted by the Soviet submarine *K-21*, one of two patrolling the exits from the Altenfjord. Beyond it, eight British and one Free French submarines were operating within their own patrol lines, which by that afternoon were off North Cape. *K-21* even fired two torpedoes at the battleship, but despite its commander's claims, no hits were made. An hour later, the German battlegroup was sighted by a British Catalina seaplane, operating from an airfield outside Murmansk. Then, at around 1920hrs, the Germans were spotted by the British submarine *Unshaken*, which passed on a sighting report. The B-Dienst network picked up Allied radio transmissions, which in turn were passed on to Grossadmiral Raeder in Berlin.

He decided that the risk to his surface ships was now too great, especially as the mopping up of the convoy could be left to others. So, at 2100hrs, he sent a one-word message to Schniewind. It read '*Abbrechen*' ('Abort'). At 2132hrs that Sunday evening, Schniewind gave the order that saw *Tirpitz* and the consorts turn about, and sail back the way they had come. Operation *Rösselsprung* had been cancelled. When Kapitän Topp questioned the Admiral, he was told, 'We're going back. Berlin's called it off.' The German battlegroup re-entered the Altenfjord early on Monday 6 July, and was back at its normal anchorage by 0900hrs. Schniewind met his senior commanders, and Vizeadmiral Kummets suggested a watered-down operation, using fast-moving destroyers. Schniewind's hands were tied, though, and he rejected the proposal. At 1800hrs on Monday evening, the German battlegroup put to sea again, and headed back to Narvik. After all

the drama of the scatter order, the threat posed by *Tirpitz* and its consorts turned out to be a damp squib.

Meanwhile, at 0400hrs on Monday 6 July, the Bv 138s took off again, and resumed their sweeps across the Barents Sea. By now, many of the merchant ships were almost out of range to the east. Still, the bomb-armed Ju 88s of KG-30 also took off at 0500hrs, and resumed their own search, extending it as far as 49° east, less than 60nm from the coast of Novaya Zemlya. Despite the successes of the previous day, the sweep proved disappointing. Most of the British ships heading towards Matochkin Inlet were either beyond the reach of the Junkers or hidden by the numerous patches of icy mist. However, the American freighter *Pan Atlantic* was spotted just after 0600hrs, and a single Ju 88 of III/KG-30 made a low-level pass at it. At 0610hrs, one of its stick of bombs plunged into the ship's forward hold, which was filled with cordite. The explosion blew the ship's bow section clean off. The *Pan Atlantic* sank in less than three minutes, and 25 crewmen went with their ship. It was all so sudden that there was not even time to send out a distress signal. The 23 survivors were eventually rescued by the corvette *Lotus*.

Meanwhile, wolfpack Eisteufel continued its eastward sweep, although its numbers were reduced, as some boats had to return to base to refuel, and others were ordered to seal the approaches to the White Sea, to intercept survivors from the convoy there. The scattered British ships were lucky not to run into any of these U-boats that day, mainly as they were steaming to the north of the wolfpack's patrol area. Still, at 1638hrs that Monday evening, Kptlt. Reinhart Reche of *U-255* torpedoed the American Liberty ship *John Weatherspoon*, which was steaming south towards Archangel, 20nm off the south-western coast of Novaya Zemlya. Reche's two torpedoes failed to sink the ship, so he finished the job 17 minutes later with two more. By then, the crew had already abandoned ship, and the only casualty was a seaman who drowned while quitting the ship. *U-255*'s skipper offered cigarettes, food and water to Master John Clark and the other 48 survivors, before



Kptlt. Reinhart Reche of *U-255* (on right), pictured in Narvik. On the left is Korvtkpt. Hans Cohausz, the commanding officer of the 11th U-boat Flotilla. During the PQ-17 campaign, Reche sank four merchantmen (*John Weatherspoon*, *Alcoa Ranger*, *Olopana* and *Paulus Potter*). Two months later, he would sink *Silver Sword* during its return to Iceland with QP-14.

heading away. The survivors were eventually rescued after making landfall on Novaya Zemlya.

An hour before, and 115nm farther north, Capt. Jauncey in the AA ship *Palomares* was dropping anchor in Matochkin Sound, accompanied by the minesweepers *Britomart*, *Halcyon* and *Salamander*, rescue ship *Zamalek* and merchantman *Ocean Freedom*. Later that evening, *Pozarica* joined them, accompanied by the corvettes *Poppy* and *La Malouine*. Jauncey and Lawford met to decide how to proceed. They began by sending *La Malouine* out again, to round up any merchant ships that could be found. Early on the morning of Tuesday 7 July, the corvette returned with four merchant ships, *Benjamin Harrison*, *El Capitan*, *Hoosier* and *Samuel Chase*. By then, the corvette *Lotus* had also arrived, its decks crammed with survivors. One of them was Dowding, who joined Jauncey to plan the convoying of their new-found charges to Archangel. Later that morning, trawlers *Lord Austin*, *Lord Middleton* and *Northern Gem* appeared, having, like *Lotus*, spent the previous two days searching for survivors. That meant the small convoy, when it sailed, would be well protected.

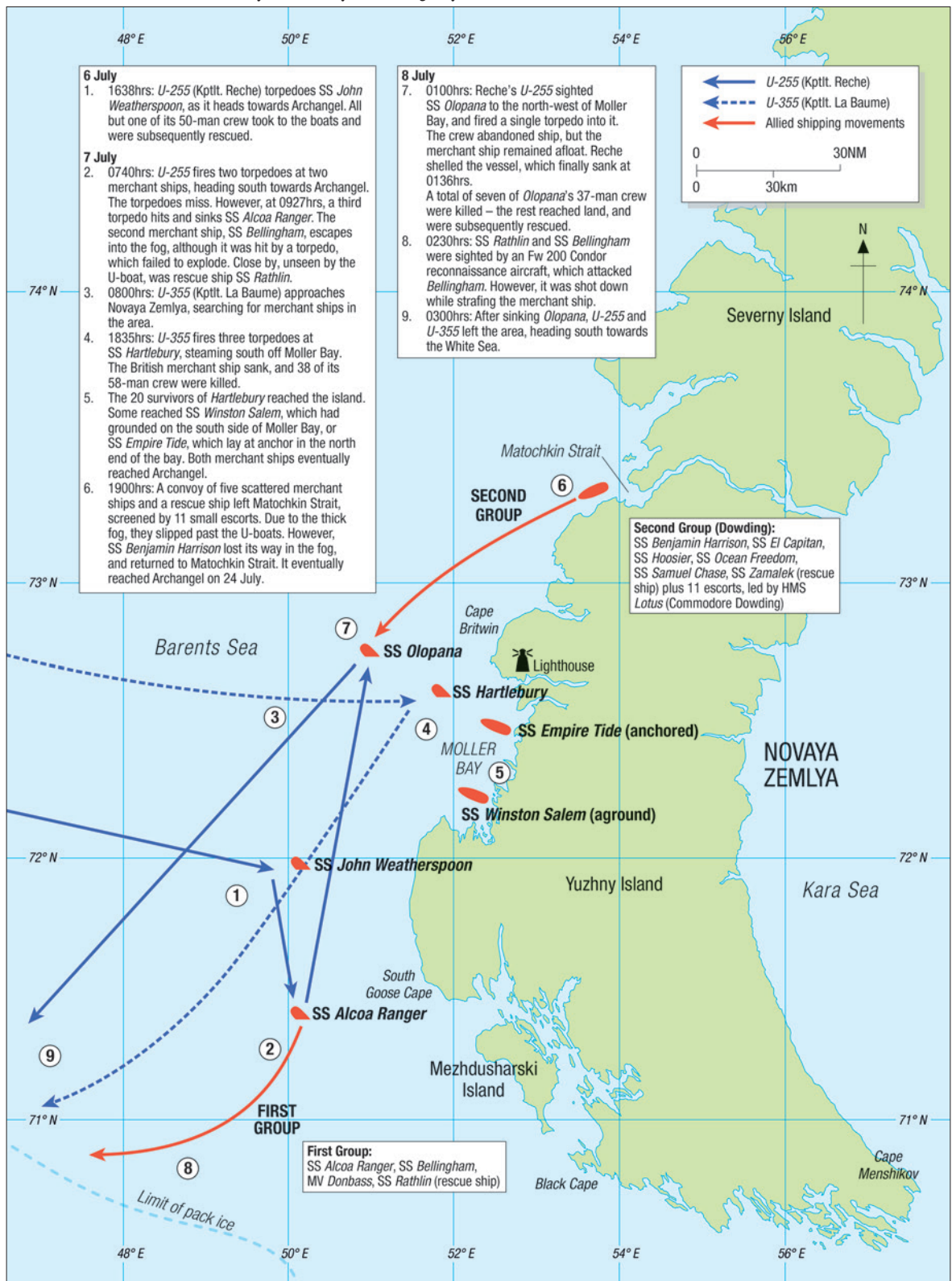
Just after 0700hrs on Tuesday, Reche in *U-255* sighted two merchant ships heading south past Novaya Zemlya. He gave chase, and after missing twice, his third torpedo struck the American *Alcoa Ranger* at 0927hrs. The ship sank in 15 minutes. The second vessel, *Bellingham*, escaped into the mist. What Reche did not realize was that the rescue ship *Rathlin* was also accompanying it. The two ships were spotted again at 0230hrs the next morning by an Fw 200 Condor. The four-engine aircraft dropped down to attack *Bellingham* from astern. As it made its approach, though, it was hit by close-range fire, and crashed nearby, breaking up on hitting the sea. That was their last encounter with the enemy, and *Bellingham* and *Rathlin* arrived safe in Archangel late the following afternoon, 9 July. They were the first ships of the convoy to make it into port.

On the morning of Tuesday 7 July, Reche was joined by a second U-boat, Kptlt. Günter La Baume's *U-355*. That evening, at 1840hrs, La Baume attacked the British merchantman *Hartlebury*, 17nm off the coast of Novaya Zemlya. He hit the ship with three torpedoes, and *Hartlebury* sank in less than ten minutes. In all, 38 of its crew were killed, while the 20 survivors reached the island.

British merchant ship
SS Hartlebury, weighing 5,082
tons, was built on the Clyde,
but its home port was London.
The vessel was carrying tanks,
aircraft and other military
stores when it was torpedoed
and sunk by *U-355* on 7 July off
the coast of Novaya Zemlya. In
all, 38 of the crew were killed.



U-boat attacks off Novaya Zemlya, 6–8 July 1942

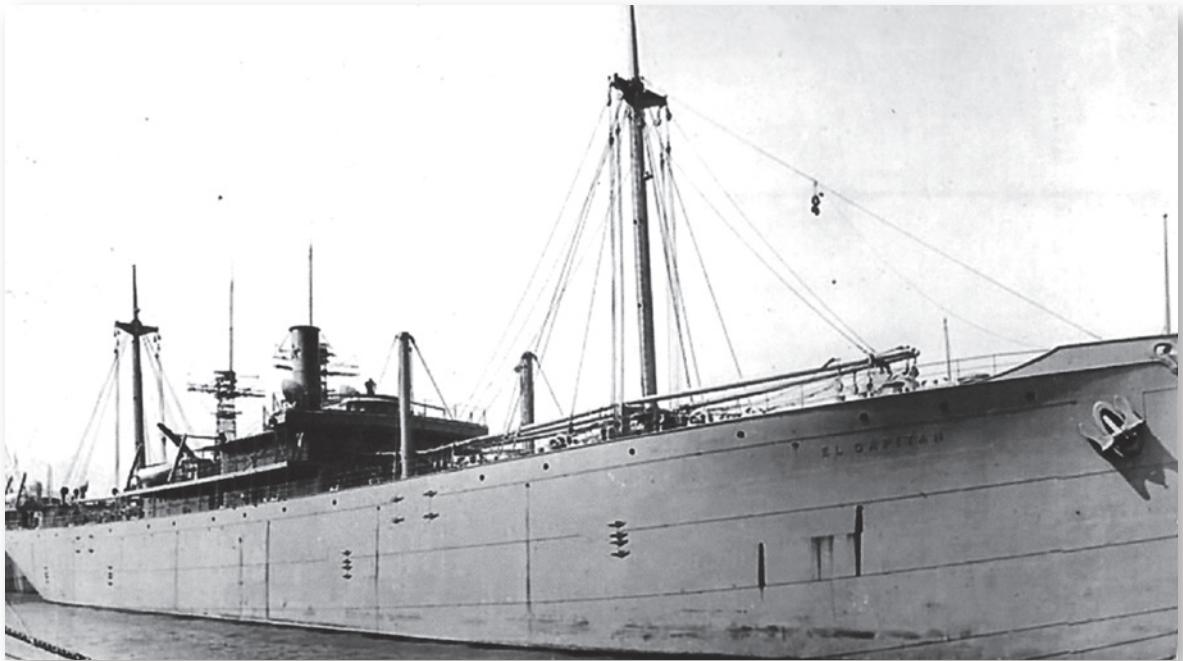


Meanwhile, the small convoy within the Matochkin Strait was getting ready to venture out to sea again. At 1900hrs on Tuesday evening, it left the Strait, and turned south. This time, the five merchant ships and a rescue ship were well-protected, screened by no fewer than 11 escorts. Soon after entering the open sea, the convoy entered a bank of mist, and the American Liberty ship *Benjamin Harrison* lost its way. Having become separated, the ship returned to Matochkin Strait. The merchantman would eventually make it safe into port just over two weeks later, on 24 July.

The others continued and passed the southern tip of Novaya Zemlya without being spotted. The patrolling U-boats might have missed the small convoy, but there were other lone ships out there, ripe for attack. At 0100hrs on 8 July, *U-255* sighted the American-registered *Olopana*, and hit the vessel with a single torpedo, which struck the port side, flooding the engine room. Seven crewmen were killed, but although the ship settled quickly, the San Francisco-built vessel didn't founder. Master Mervin C. Stone and 34 of his crew were able to take to the boats, and headed towards land. At 0115hrs, *Reche* surfaced, and questioned the survivors. He passed them supplies as his deck crew fired at *Olopana* with their 88mm deck gun. *Olopana* finally sank at around 0136hrs.

This was the last of the attacks off Novaya Zemlya. La Baume had to return to Narvik to refuel, while *Reche* was ordered south to join the U-boats gathering off the entrance to the White Sea. The Luftwaffe would be patrolling there, too. So, Dowding's convoy would still have a fight on its hands before it reached Archangel. The mist thickened during Wednesday 8 July, which protected it from prowling aircraft, but at 1630hrs, the leading ships ran into a line of pack ice. The trawler *Northern Gem* struck it head on, but it was built for those conditions, and wasn't seriously damaged. Less fortunate were *Ocean Freedom* and *Zamalek*, which ran hard aground. It appeared that this pack ice lay off the Russian coast, and extended for at least 100nm. The other

The old American-built, 5,255-ton merchant ship *El Capitan* was the only vessel in the convoy to fly under a Panamanian flag, even though the crew were almost all American. It was bombed and sunk on 10 July, close to the entrance to the White Sea.



ships backed off, and then their crews set about pulling the grounded ships off. This was achieved by midnight, and the convoy attempted to re-form, but the thick mist hindered its assembly. Eventually, it continued in two groups. In the first, *El Capitan* and *Hoosier* were escorted by Jauncey in *Palomares*, accompanied by *Salamander*, *Poppy*, *La Malouine*, *Lord Austin* and *Zamalek*, while two hours behind them, *Samuel Chase* and the bow-damaged *Ocean Freedom* were protected by *Lotus* with Dowding aboard, accompanied by *Britomart*, *Halcyon*, *Lord Middleton* and *Northern Gem*.

They both set out on a more westerly course than planned, hoping to skirt the pack ice off Cape Kanin. Then, on the morning of 9 July, the mist cleared, leaving them dangerously exposed to attack. It did, however, enable them to spot two lifeboats from *Pan Atlantic*, and rescue the survivors. At 1020hrs, Dowding's group was sighted by *U-457*, which reported the news to the rest of the wolfpack. Some 20 minutes later, it was the turn of Jauncey's group, which was spotted by *U-255*. By now, the two groups were about 25nm apart, and following different courses. While Dowding's group headed directly south, skirting the pack ice off Cape Kanin, Jauncey steamed south-west, towards Cape Suyatoy, the western entrance to the White Sea. Then, at 1420hrs, two patrolling Shads sighted Jauncey's group 85nm from the coast of the Kola Peninsula.

Dowding's group ran into trouble, too. At 1640hrs, Kvtkpt. Brandenburg in *U-457* launched a torpedo spread at the starboard quarter of Dowding's convoy, assisted by Kptlt. von Hymmen's *U-408* and Kptlt. Bielfeld's *U-703*, which attacked at long range from astern. All the torpedoes were successfully evaded, and a spirited counter-attack by *Lotus* and *Northern Gem* using depth charges drove the U-boats under, which enabled the convoy to escape. The two escorts re-joined the convoy, but it was clear that they were liable to encounter more trouble as they steamed south. However, Jauncey's group was hit first.

At 1725hrs, 24 Ju 88s from KG-30 appeared from the west, and attacked Jauncey's convoy in small groups, approaching from different directions. Despite the ferocity of these attacks, no ship was hit, but American merchantman *Hoosier* was badly damaged by a near miss and lost power. The ship was also on fire. The crew of 54 were taken off by *Poppy*, while *La Malouine* tried and failed to take *Hoosier* under tow. The two corvettes attempted to scuttle the ship but were unable to, so they re-joined the convoy and *Hoosier* was abandoned. Early the following morning, the hulk was sunk by Kptlt. Marks in *U-376*.

The bombers returned at 0150hrs on Friday morning, 10 July. Inevitably, all 16 of them concentrated on the Panama-flagged but American-crewed merchantman *El Capitan*. One of the Ju 88s dropped a well-placed stick of bombs, and three of them hit the after part of the freighter. This blew out the sides of the engine room and its after holds, and *El Capitan* began listing heavily to starboard. Master John Therik ordered his 58-man crew off, as well as 19 military passengers. All of them were taken aboard the trawler *Lord Austin*. Once more, attempts to scuttle the ship failed, and so *El Capitan* was abandoned. Jauncey's escorts then pressed on towards the Russian coast, just 60nm to the south. *El Capitan* was sunk an hour later by a torpedo launched from the shadowing U-boat *U-251*, commanded by Kptlt. Heinrich Timm.

Eight more of the bombers returned a little after 0400hrs, and this time they targeted the rescue ship *Zamalek*. At one stage, the ship was completely hidden by bomb splashes, but amazingly, it emerged unscathed, apart from

GERMANS

1. Wolfpack Eisteufel (U-251, U-255, U-376, U-408, U-457 and U-703)
2. Kampfgeschwader 30 (KG-30) Gruppe II and Gruppe III (based at Banak airfield)

KOLA
PENINSULA

POLYARNY

MURMANSK

VAENGA

BARENTS SEA

CAPE TERIBERSKI

BRITISH

- A. SS *Ocean Freedom* and SS *Samuel Chase* plus escorts, led by HMS *Lotus* (Commodore Dowding)
- B. SS *El Capitan*, SS *Hoosier* and *Zamalek* (rescue ship), plus escorts, led by HMS *Palomares* (Capt. Jauncey)
- C. Soviet destroyers

EVENTS

8 July

1. 1630hrs: On encountering the pack ice blocking the direct route to the White Sea, several ships grounded on the ice amid thick fog, and it took several hours to free them. The rescue ship *Zamalek* was pulled free shortly before midnight, and the makeshift convoy continued, heading towards the south-west to keep clear of the obstacle. However, it had now become badly separated in the fog.
2. 1900hrs: Five U-boats of wolfpack Eisteufel head towards the entrance to the White Sea, searching for surviving ships from the convoy.

9 July

3. 0400hrs: When the fog clears, four escorts (*Palomares*, *Poppy*, *Salamander* and *La Malouine*) locate the merchant ships *El Capitan* and *Hoosier*, plus the rescue ship *Zamalek*, and form up around them. As the remainder of the makeshift convoy cannot be located, this force continues alone.
4. 0420hrs: The fog lifts, allowing five escorts (*Britomart*, *Halcyon*, *Lord Middleton*, *Lotus* and *Northern Gem*) to form up again around two merchant ships, *Samuel Chase* and *Ocean Freedom*. They also spot lifeboats from other merchant ships, and spend time rescuing the survivors. By now, the two groups of the convoy are some 25–30 miles apart.
5. 1020hrs: U-457 spots the rearmost group of the convoy, led by Dowding, and shadows it on the surface, while radioing the other boats to join it.
6. 1044hrs: Similarly, U-255 sights the leading group of the convoy, and requests reinforcements. As U-255 continues to shadow the Allied force, U-251, U-376 and U-703 all move to join it.

7. 1100hrs: The leading force, led by Capt. Jauncey of HMS *Palomares*, rejects the suggestion to steam east, closer to the pack ice, as fuel levels among his escorts are now critically low.
8. 1420hrs: Two Bv 138 reconnaissance aircraft of KüFlGr-406 spot Jauncey's leading group and shadow it, radioing regular sighting reports to their base at Banak, and to U-boat command in Narvik.
9. 1640hrs: Three U-boats (U-457, U-408 and U-703) carry out a torpedo attack on the rearmost convoy group. This proves unsuccessful, and *Lotus* and *Northern Gem* counter-attack using depth charges, forcing the boats to submerge, and allowing the convoy to escape. This, though, delays progress of the group, which is now 40 miles astern of the leading portion of the convoy.

10. 1725hrs: Jauncey's leading group of the convoy is attacked by 24 Ju 88 bombers of II and III/KG-30. They attack in small groups, from varying directions, and although no ships are hit, *Hoosier* is badly damaged by three near-misses. Attempts to take it under tow are unsuccessful. As it begins sinking slowly, the crew abandon ship. They are quickly rescued. Attempts to sink *Hoosier* by gunfire are abandoned.

11. 1730hrs: The shadowing U-255 is sighted on the surface, and *Poppy* leaves the convoy to engage it, driving it under. This buys time for the rescue of survivors to be completed, and the convoy continues on its way.

10 July

12. 0150hrs: The bombers of II and III/KG-30 return, and concentrate their efforts on *El Capitan*. A Ju 88 of II/KG-30 drops three bombs that land beside the merchant ship, rupturing the hull and flooding the engine room. As *El Capitan* begins to settle, the crew abandon ship and are rescued by HMT *Lord Austin*. No crewmen's lives were lost in the attack, although the escorts claim two bombers shot down. This claim, however, was not confirmed by Luftflotte 5, so the probability is that the aircraft were merely damaged.
13. 0256hrs: The crippled *Hoosier* is torpedoed and sunk by U-376.
14. 0300hrs: U-251 torpedoes and sinks the crippled *El Capitan*. The U-boat then turns north again, in search of stragglers.

17

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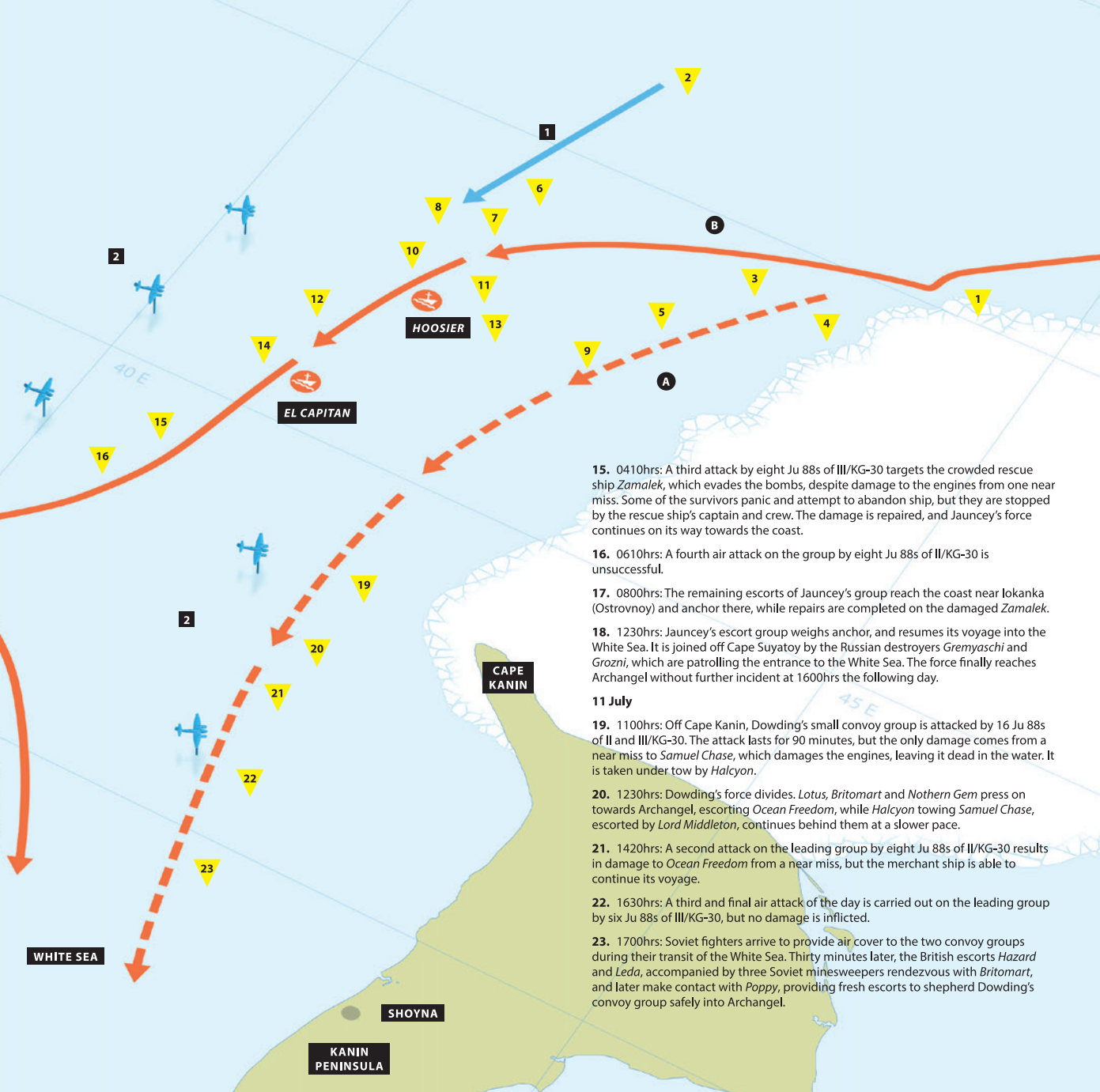
LOKANKA

CAPE
SUYATOY

C

THE FINAL APPROACH TO THE WHITE SEA, 9–16 JULY 1942

The first ship of the convoy to reach the safety of Archangel was the British-flagged merchantman *SS Bellingham*. It was accompanied by the rescue ship *SS Rathlin*, crowded with survivors, and the Russian tanker *MV Donbass*, which they encountered south of Novaya Zemlya. The small makeshift convoy following behind them was less fortunate. It left the Matochkin Strait in Novaya Zemlya late on 7 July, bound for Archangel. Due to thick fog, the convoy managed to evade any prowling U-boats lying off the island. However, it made slow progress during the 400-mile voyage, as it encountered ice floes and extensive pack ice and more fog banks between Novaya Zemlya and the entrance to the White Sea. This forced them farther to the west, meaning they were moving closer to German air bases. Then, on 9 July, as they drew closer to the Russian coast, the escort commander Capt. Dowding discovered they were being shadowed by several U-boats. It was clear that they would have a fight on their hands if they were to reach their destination.



15. 0410hrs: A third attack by eight Ju 88s of III/KG-30 targets the crowded rescue ship *Zamalek*, which evades the bombs, despite damage to the engines from one near miss. Some of the survivors panic and attempt to abandon ship, but they are stopped by the rescue ship's captain and crew. The damage is repaired, and Jauncey's force continues on its way towards the coast.

16. 0610hrs: A fourth air attack on the group by eight Ju 88s of II/KG-30 is unsuccessful.

17. 0800hrs: The remaining escorts of Jauncey's group reach the coast near Iokanka (Ostrovnoy) and anchor there, while repairs are completed on the damaged *Zamalek*.

18. 1230hrs: Jauncey's escort group weighs anchor, and resumes its voyage into the White Sea. It is joined off Cape Suyatoy by the Russian destroyers *Gremyaschi* and *Grozni*, which are patrolling the entrance to the White Sea. The force finally reaches Archangel without further incident at 1600hrs the following day.

11 July

19. 1100hrs: Off Cape Kanin, Dowding's small convoy group is attacked by 16 Ju 88s of II and III/KG-30. The attack lasts for 90 minutes, but the only damage comes from a near miss to *Samuel Chase*, which damages the engines, leaving it dead in the water. It is taken under tow by *Halcyon*.

20. 1230hrs: Dowding's force divides. *Lotus*, *Britomart* and *Nothern Gem* press on towards Archangel, escorting *Ocean Freedom*, while *Halcyon* towing *Samuel Chase*, escorted by *Lord Middleton*, continues behind them at a slower pace.

21. 1420hrs: A second attack on the leading group by eight Ju 88s of II/KG-30 results in damage to *Ocean Freedom* from a near miss, but the merchant ship is able to continue its voyage.

22. 1630hrs: A third and final air attack of the day is carried out on the leading group by six Ju 88s of III/KG-30, but no damage is inflicted.

23. 1700hrs: Soviet fighters arrive to provide air cover to the two convoy groups during their transit of the White Sea. Thirty minutes later, the British escorts *Hazard* and *Leda*, accompanied by three Soviet minesweepers rendezvous with *Britomart*, and later make contact with *Poppy*, providing fresh escorts to shepherd Dowding's convoy group safely into Archangel.

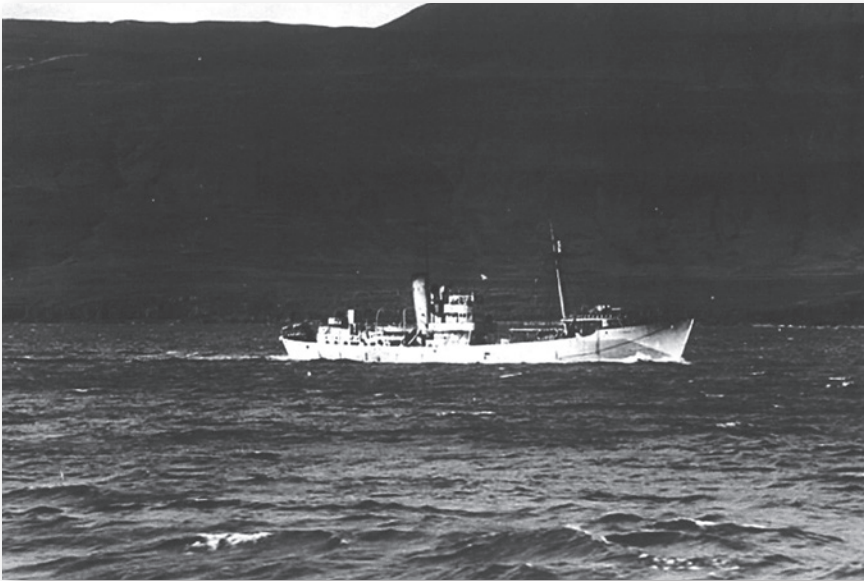
some engine damage from a near miss. Some of the survivors on board tried to abandon ship at the height of the attack, but Capt. Owen Morris was having none of it, and forced them away from the boats. The crew worked to repair the engines as the convoy neared the Russian coast. They passed Cape Suyatoy at 0800hrs that morning, and the convoy anchored off the small harbour of Iokanka (now Ostrovnoy) while the repairs were completed. Just after noon, Jauncey's convoy put to sea again, where it was joined off the headland by a pair of Soviet destroyers, *Gremyaschi* and *Grozni*, which helped shepherd them across the White Sea. *Zamalek* and Jauncey's five escorts eventually reached Archangel at 1600hrs the following day, 11 July.

Meanwhile, Dowding's element of the convoy was also attacked. The worst moment came at 1100hrs on Saturday 11 July, when it was bombed by 16 Ju 88s. A near miss damaged American merchantman *Samuel Chase*, and its engines were shaken and damaged by the blast. The minesweeper *Halcyon* took the merchantman in tow. Clearly, this slowed things down, so Dowding left *Lord Middleton* to support the towing pair, while *Lotus* pressed on to Archangel, escorting *Ocean Freedom*, with the help of *Britomart* and *Northern Gem*. Two more attacks by KG-30 followed that afternoon, both targeting *Ocean Freedom*. A near miss caused damage, but this didn't slow the ship down. So, the British merchantman and the three escorts continued on their way. Somehow, the towing group wasn't attacked that afternoon.

At 1700hrs, Soviet fighters appeared, and British and Soviet escorts arrived to shepherd Dowding's ships into port. They arrived late on 11 July, where they found *Bellingham*, together with the Soviet tanker *Donbass*, which had made it through on its own the previous day. Also in port were the rescue ship *Rathlin*, the corvette *Dianella*, and what remained of Jauncey's force. It was a small enough collection of vessels from Convoy PQ-17 and its close escorts. As Dowding put it, 'Not a successful convoy. Three ships brought to port out of 36.' This was a slight understatement, as at that point he had not known about the safe arrival of *Donbass*. However, it summed up his huge disappointment, and the need to do more. So, on Thursday 16 July, he set out again in *Poppy*, accompanied by *Lotus* and *La Malouine*. On reaching the south-western tip of Novaya Zemlya, they followed the coastline, finding 12 survivors from *Olopana* near South Goose Cape.

Then, on entering Moller Bay, they came across American merchantman *Winston Salem*, aground on a sandbank. Without tugs there was little Dowding could do, so he radioed for help, and pressed on. A few hours later, Dowding spotted the British CAM ship *Empire Tide*, lying at anchor near the northern corner of the bay. The survivors from *Hartlebury* were aboard the British ship. Promising to return, Dowding continued to Matochkin Strait. There he was delighted to find Lt. Gradwell's trawler *Ayrshire*, together with his three mercantile charges, *Ironclad*, *Silver Sword* and *Troubador*. By whitewashing all four vessels, Gradwell managed to avoid discovery. Then, in the forenoon of 7 July, they left their bolthole, and headed for Matochkin Inlet. They arrived there safe on 11 July, and waited for help. It was a brilliant piece of initiative by the young RNVR lieutenant, who had been a lawyer before the war.

Also sheltering in the inlet was *Benjamin Harrison*, the American merchantman that had turned back on 7 July. Anchored nearby was the Soviet tanker *Azerbaijan*, and two Soviet vessels, the icebreaker *Murman*



One of the real heroes of PQ-17 was Acting Lt. Leo Gradwell RNVR, a former barrister who became a naval officer at the outbreak of war. He commanded HMT *Ayrshire*, which shepherded three merchantmen to the safety of Matochkin Strait, after hiding them in the ice pack until the German air attacks abated.

and the armed trawler *Kirov*. Dowding transferred over to *Murman* while arranging the escort of these ships to Archangel. At noon on Monday 20 July, Dowding led his convoy out of the inlet and set off down the coast. On passing Moller Bay they were joined by *Empire Tide*. This time the voyage was uneventful. On Wednesday morning they were reinforced by the AA ship *Pozarica*, plus *Dianella*, *Gremyaschi* and *Grozni*, and the minesweepers *Bramble*, *Hazard* and *Leda*. Late on Friday 24 July, these last stragglers from Convoy PQ-17 finally reached Archangel. It brought Dowding's tally of saved merchant ships up to 11.

This increased to 12 on 28 July when Soviet tugs managed to bring *Winston Salem* into port. After it had run aground while entering Moller Bay on 8 July, the American ship had acted as a rallying point for survivors from other ships, including the *Alcoa Ranger*, who were housed in a temporary camp established ashore. On 15 July, Master William Lovgren transferred 150 of the less fit survivors to a Soviet schooner that put in to the bay, and these were duly taken to Archangel. Two days later, after they were circled by a Shad, Lovgren sent his own crew ashore to take refuge in the camp in case the ship was bombed.

On 29 July two Soviet armed trawlers arrived, escorting the merchant ship *Dikson*. They helped pull *Winston Salem* off the sandbank on 22 July. Together they headed to Archangel and arrived there without incident six days later. The search for other survivors continued; some made it ashore, on either Novaya Zemlya, the Kola Peninsula or northern Norway. One group to arrive at the last of these comprised the survivors of the *Carlton*, who were imprisoned on reaching the Norwegian coast on 24 July. Many of these survivors didn't make it, and died of wounds, hunger or exposure before reaching land. Two boats from *Bolton Castle* reached the Kola Peninsula two weeks after their ship was sunk, while a boat from *Honomu* was found after 13 days at sea. For many of the seamen who had endured the hell that was Convoy PQ-17, the ordeal they faced reaching safety was equally fraught. Over 150 of their shipmates died out there, in the icy bleakness of the Barents Sea.

AFTERMATH

Without a doubt, Convoy PQ-17 was a complete disaster for the Allies. Of the 36 merchant ships which sailed from Iceland, two had run aground and after refloating had to turn back. That meant 34 merchant ships passed Bear Island and entered the Barents Sea. Of these, 16 were sunk. Eight were lost in air attacks, and the remaining eight were sunk by U-boats, although most of these had already been damaged or even abandoned following an air attack. The materiel lost amounted to 430 medium tanks, 3,350 trucks and other vehicles, 210 aircraft, carried in crates, and some 99,316 tons of military cargo, including ammunition, spares and fuel. For the Soviets, their loss was something of a disaster, particularly as this coincided with the launch of *Fall Blau* (*Case Blue*), the Axis strategic summer offensive in southern Russia, aimed at the capture of Stalingrad, and the oilfields of the Caucasus. At the time PQ-17 scattered, German panzers had reached the River Don, and were poised to sweep on to Stalingrad on the Volga. That lost equipment – enough to equip a Soviet Army – would undoubtedly have made the Soviet task of containing this onslaught considerably easier.

The Germans, of course, were delighted with the success of the attacks on PQ-17. Their bomber and U-boat attacks had been unusually well

A boatload of survivors from a merchant ship from PQ-17, probably SS *John Weatherspoon*, at the moment of being rescued by corvette *La Malouine* on 9 July. While most survivors were rescued fairly quickly, others had a long, harrowing time of it before they reached safety.



co-ordinated, and the results spoke for themselves. The Germans were lucky, too. Before the order to scatter, the convoy had proved it could repel even the heaviest of attacks. Without this mutual defence, the individual ships were little more than victims for the Germans, ripe for the kill. The result was something tangible for the Germans – a demonstration that even in the Arctic, far from the crucial battlegrounds of southern Russia, German armed forces could still exert a major influence on the outcome of the war on the Eastern Front. What might have taken the edge off the post-operational glow for the Kriegsmarine were the restrictions that had made a mockery of Operation *Rösselsprung*. It betrayed a degree of paralysis in German naval operations, caused primarily by the need to seek approval from Hitler for every major operation. It demonstrated, effectively, that Hitler regarded *Tirpitz* as too valuable an asset to risk in battle. Once the Allies realized this, the threat posed by the German ‘fleet in being’ would be considerably lessened.

Understandably, the Soviets were furious with the British Admiralty, and the deputy of Admiral Kuznetsov, Chief of the Soviet Naval Staff, even hurled accusations of cowardice. After the disaster, the Admiralty cancelled any further PQ convoys until their safety could be reviewed. British Prime Minister Winston Churchill described the disaster as ‘one of the most melancholy naval episodes in the whole of the war’. The Soviets demanded an inquiry, and this was duly held on 28 July, with Soviet representatives taking part. This, though, was largely a whitewash. It was judged that no individual blame could be assigned. However, it was clear to everyone involved that there was someone to blame – First Sea Lord Admiral Sir Dudley Pound, the man who had issued the order to scatter. However, Churchill and his cabinet deemed it politically dangerous to single out the First Sea Lord, as it would hugely undermine public confidence in both the Admiralty and the Royal Navy. Guided by Pound’s testimony, the inquiry was told that the decision was based on the intelligence available at the time. However, the Soviets were unimpressed, and still blamed Pound.

So, Churchill offered up Rear Admiral Hamilton instead, for ordering the destroyers to quit the convoy. This was entirely unfair, as Hamilton and Broome had acted according to their own risk-averse orders. It was blatantly obvious that the fault lay with Pound. Even Admiral Tovey said as much, stating that, ‘The order to scatter the convoy had, in my opinion, been premature.’ However, it was only after the war was over that the real facts came to light, which proved that there was enough information available to show *Tirpitz* was not at sea at the time, and the decision to scatter had been a costly mistake. As Tovey put it, ‘the convoy had so far covered more than half its route with the loss of only three ships. Now its ships, spread over a wide area, were exposed without defence to the powerful enemy U-boat and air forces. The enemy took prompt advantage of this situation, operating both weapons to their full capacity.’

Afterwards, Hamilton declared that had he known how poor the Admiralty’s intelligence was, then he might have been able to do more. As he put it, ‘I suppose I ought to have been a Nelson – I ought to have disregarded the Admiralty’s signals.’ The whole affair had been covered up and set aside. However, the Admiralty learned some lessons from the debacle. Further Arctic convoys were postponed until the days began to shorten, around October. They would also be provided with a strong ‘fighting escort’ of destroyers to accompany them all the way to Russia.



Kptlt. Günter La Baume and five of the crew of *U-355*, pictured in Narvik after the presentation of Iron Crosses to the U-boat men. La Baume, wearing the white cap, sank *SS Hartlebury* on 7 July. *U-355* was lost with all hands in April 1944.

The Russians put heavy diplomatic pressure on the Western Allies to resume convoy operations as quickly as possible. Given the critical military situation between the Don and Volga rivers that autumn, and the threat to Stalingrad, this was understandable.

In the end, the Admiralty bowed to political pressure and agreed to the running of an eastbound convoy in September. The 40 merchantmen that made up Convoy PQ-18 would be very well protected, and for the first time would include an escort carrier, *Avenger*, which could both provide fighter cover and also detect U-boats lying in the convoy's path. Although 13 merchant ships were lost, the bulk of the convoy made it through, and the Germans lost four U-boats and approximately 35 bombers in the convoy battle. It proved that with better organization, and a strong, well-co-ordinated defence, the disaster of PQ-17 was not destined to be repeated. Just as importantly, before the convoy sailed, Allied intelligence efforts were meticulous, and Ultra intercepts were able to reveal there was no significant threat of a surface attack.

A problem that took longer to deal with was the distrust between the British merchant marine and Royal Navy. Many merchant seamen claimed the Navy had deserted them, and this became a common impetus for brawls and bar fights in British ports. To some degree, the same distrust existed with American merchant seamen, too, but this was better contained by geography, and proved less of a problem to national morale. Many in the Royal Navy also felt a sense of shame in the aftermath of the scatter order, and, to a lesser extent, a distrust of the Admiralty's ability to make decisions. All this took time to heal. Only the resumption of convoys, the turning of the tide in both the Arctic and the Atlantic, and the demonstration of British naval professionalism and courage effectively ended this distrust.

THE BATTLEFIELD TODAY

REMEMBERING PQ-17

As with any naval battlefield, there are no monuments to mark where the action took place, or where participants lost their lives. Instead, there is just the bitterly cold steel-grey waters of the Barents Sea. The U-boat crews of the Kriegsmarine popularized a poetic lament, which read, ‘On a sailor’s grave no flowers bloom/They have no grave but the cruel sea.’ These lines are particularly apposite when thinking of the mariners and aviators who lost their lives in the battle for Convoy PQ-17. Named after the 16th-century Dutch explorer Willem Barentsz, the Barents Sea is really a vast underwater shelf, extending from the northern coast of Norway and Russia towards the North Pole. This means that it is shallow, often less than 750ft (230m) deep. For much of the year, it is largely covered by ice, although in recent decades the pack ice has retreated much farther than it had in the summer of 1942. It remains, though, a harsh, cold and strangely eerie place.

Since the end of World War II, the sea has been extensively charted and mapped, as for half a century, it was the front line in the Cold War. It was also fished heavily, and the area remains an important fishing ground for both Norway and Russia. In recent years, it has also been the site of extensive geological research and underwater exploration. The floor of the Barents Sea is rich in oil and gas, but the challenges faced in extracting hydrocarbons in such a harsh environment have limited its exploitation. As a result, the seabed there has been extensively studied and many of the wreck sites linked to the PQ-17 convoy battle have been identified. Because these are of no economic value, the wrecks have been noted and surveyed, but they and any human remains they contain have been left alone, in the cold Stygian darkness.

However, there are other legacies of the convoy. In Greenwich in London, the National Maritime Museum has ship models and plans of some of the merchant ships and warships that took part in the battle, and a superb collection of relevant photographs and paintings. Also in London, the Imperial War Museum has an extensive collection of audio recordings, including several by participants in this operation. In Portsmouth, the National Museum of the Navy has artefacts relating to

The destination of PQ-17 was Archangel, the remote Russian port at the southern end of the White Sea. The sea itself was largely landlocked, with an entrance from the Barents Sea less than 30 miles wide. Unless the Soviet Navy kept this approach clear, it was a perfect hunting ground for U-boats and German aircraft. This late 19th-century Dutch map shows these geographical constraints with commendable clarity.



the events outlined here, as does the Royal Navy Submarine Museum in nearby Gosport. Also well worth a visit is the US Naval Museum in Washington Naval Yard, Washington, DC, which has objects relating to the US involvement in the PQ-17 debacle, as does the Deutsche Marinemuseum (German Naval Museum) in Wilhelmshaven, which tells the stories of the U-boat crews.

Although no warships of the battle survive, there are surviving examples of their kind. For instance, in Halifax, Nova Scotia, HMCS *Sackville* is the last extant Flower-class corvette – the sister of the little escorts like *Lotus* and *Poppy* that played a major part in shepherding home the surviving ships of the convoy. As for those merchant vessels, four American-built Liberty ships can be found in Baltimore, Maryland, San Francisco, California, Kodiak, Alaska and Piraeus, Greece. All but the vessel in Alaska are now museum ships. From the German side, U-995 is the last original Type VIIC U-boat, the kind deployed in wolfpack Eistufel, and is at the Laboe Naval

Museum outside Kiel. As for the aircraft involved, the US Air Force Museum in Dayton, Ohio, has a restored Ju 88, as does the Royal Air Force Museum in Hendon outside London. There are five surviving He 111s in air museums in Britain, Norway and Spain. A few He 115s still extant, but are either unrestored or in private hands. No restored Bv 138s exist, although the remains of one are displayed in a museum in Helsingør in Denmark.



A U-boat commander tracking a target using his attack periscope. The only submerged attacks on merchantmen from PQ-17 took place unsuccessfully during the passage to the Barents Sea, and with better results off Novaya Zemlya, when *U-255* and *U-355* sank a total of four ships.

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Key to military symbols

Army Group	Army	Corps	Division	Brigade	Regiment	Battalion
Company/Battery	Platoon	Section	Squad	Infantry	Artillery	Cavalry
Airborne	Unit HQ	Air defence	Air Force	Air mobile	Air transportable	Amphibious
Anti-tank	Armour	Air aviation	Bridging	Engineer	Headquarters	Maintenance
Medical	Missile	Mountain	Navy	Nuclear, biological, chemical	Ordnance	Parachute
Reconnaissance	Signal	Supply	Transport movement	Rocket artillery	Air defence artillery	

Key to unit identification

Unit identifier	Parent unit
	(+) with added elements
	(-) less elements

Front cover main illustration: The first air attack on Convoy PQ-17, 2 July 1942. (Adam Tooby)
Title page image: Warships from Admiral Tovey's Distant Covering Force anchored at Hvalfjörður. (Stratford Archive)